1997 UBS Series Owner's Handbook.

JACKAROO & MONTEREY

HOLDEN

Owner's Name .....

Address .....

Town .....

State.....Postcode .....

Model Name .....

Reg. No.....Eng. No. .....

Odometer Reading .....

Date of Purchase .....

(17 character I.S.O.V.I.N.) Vehicle Identification Number

Vehicle Identification Certificate

Selling Dealer's
Stamp & Signature

Isuzu-General Motors Australia Limited, A. C. N. 006 962 572 (hereinafter I-GM).

Change of name, address or ownership

In the event of a Safety Recall, or for various reasons, we may need to contact you as the owner of this car. Also, if less than three years old, this car will qualify for Roadside Service, refer Chapter 9. If you have recently changed your address, or name, or purchased this car second-hand, please help us to help you by taking a few minutes to fill in and mail the form on the third page of this handbook.

Part No. 92074444
June 1997 (1997 model Print 2)

CONTENTS

Instruments, switches, glovebox, heating, opening bonnet, clock, exterior lights, radio, wipers, washers cigarettes and horn. **Dash 1**

Keys, locks, doors, door locks, ignition lock. **Locks 2**

Seats, seat belts, mirrors, windows, park brake, interior lighting, removing the roof and windows. **Body features 3**

Engine starting, running in, use of transmission, four wheel drive, driving precautions. **Driving 4**

Exhaust caution, fuel filling, fuel tank capacity, emission control, reducing fuel consumption. **Fuel 5**

Accidents, air bag, first aid, towing the vehicle, flat tyre, engine overheating, flat battery, fuses, bulb replacement, draining diesel water seperator and bleeding diesel fuel system. **Emergencies 6**

Service manuals, checking: oil, water, power steering fluid, clutch fluid, brake fluid, washer fluid, battery, tyre pressure. **Weekly checks 7**

Lubricants and capacities, identification plates, dimensions. **Specifications 8**

Warranty, HoldenWise, Holden Dealers, Customer Assistance. **After sales 9**

Loading and towing information, towing precautions. **Towing 10**

General cleaning and washing. **Cleaning 11**

Maintenance schedule, labour times, service coupons. **Servicing 12**

Index

We thank you for choosing Holden and want to assure you of our continuing interest in your driving pleasure and satisfaction.

This handbook applies to current Jackaroo and Monterey models. Therefore, due to different models and options you may find reference in this Handbook to some equipment not fitted to your own vehicle.

Please note that all information, illustrations and specifications in this Handbook are based on the latest production information available at the time of printing. I-GM reserves the right to make changes at any time without notice and without incurring any obligation.

CHANGE OF ADDRESS OR OWNERSHIP

In the event of a Safety Recall, or for various reasons, Holden may need to contact you as the owner of this car.

Also, if less than three years old, this car will qualify for Roadside Service, refer Chapter 9.

If you have recently changed your address, or name, or purchased this car second-hand, please help us to help you by taking a few minutes to fill in and mail this form. The mailing address is shown on the back of this page.

Please tick the appropriate box:

☐ Original Owner ☐ Subsequent Owner

Mr, Mrs, Ms, Miss, Dr, etc.

First name in full or initials

Surname or Name of Company/Institution/Government Department

Address

Street/box

City/Town

State Postcode

Car registration number

Holden Number (see page 8-8 of this book)

ISOVIN No (shown on page 8-8 of this handbook)

Place in an envelope and mail to:

The Manager - Warranty Administration
Service Department
General Motors-Holden's Automotive Limited
Box 548D, G.P.O.
Melbourne
Victoria, 3001

CHANGE OF ADDRESS OR OWNERSHIP

In the event of a Safety Recall, or for various reasons, Holden may need to contact you as the owner of this car.

Also, if less than three years old, this car will qualify for Roadside Service, refer Chapter 9.

If you have recently changed your address, or name, or purchased this car second-hand, please help us to help you by taking a few minutes to fill in and mail this form. The mailing address is shown on the back of this page.

Please tick the appropriate box:

☐ Original Owner ☐ Subsequent Owner

Mr, Mrs, Ms, Miss, Dr, etc.

First name in full or initials

Surname or Name of Company/Institution/Government Department

Address

Street/box

City/Town

State Postcode

Car registration number

Holden Number (see page 8-8 of this book)

ISOVIN No (shown on page 8-8 of this handbook)

Place in an envelope and mail to:

The Manager - Warranty Administration
Service Department
General Motors-Holden's Automotive Limited
Box 548D, G.P.O.
Melbourne
Victoria, 3001

CHANGE OF ADDRESS OR OWNERSHIP

In the event of a Safety Recall, or for various reasons, Holden may need to contact you as the owner of this car.

Also, if less than three years old, this car will qualify for Roadside Service, refer Chapter 9.

If you have recently changed your address, or name, or purchased this car second-hand, please help us to help you by taking a few minutes to fill in and mail this form. The mailing address is shown on the back of this page.

Please tick the appropriate box:

☐ Original Owner ☐ Subsequent Owner

Mr, Mrs, Ms, Miss, Dr, etc.

First name in full or initials

Surname or Name of Company/Institution/Government Department

Address

Street/box

City/Town

State Postcode

Car registration number

Holden Number (see page 8-8 of this book)

ISOVIN No (shown on page 8-8 of this handbook)

Place in an envelope and mail to:

The Manager - Warranty Administration
Service Department
General Motors-Holden's Automotive Limited
Box 548D, G.P.O.
Melbourne
Victoria, 3001

CHAPTER 1

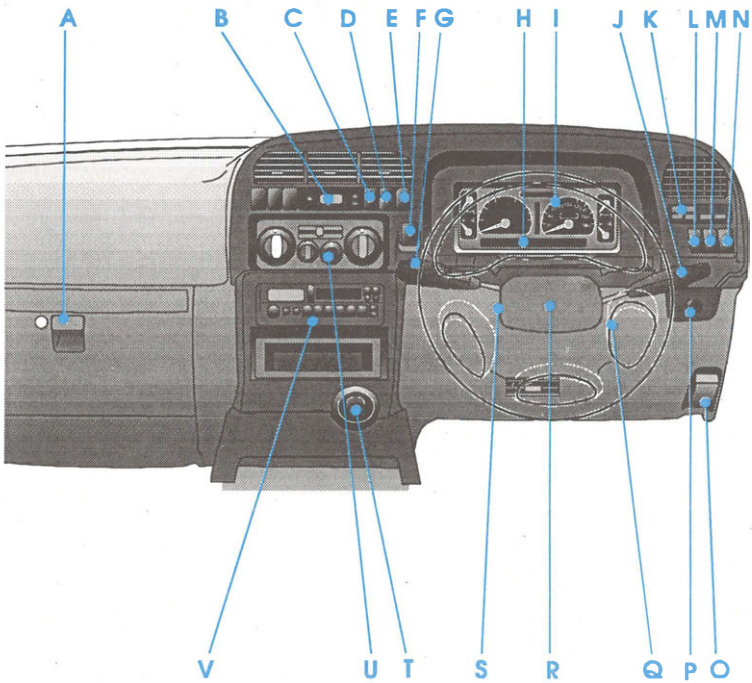
Dash

The following page illustrates the dash board, identifying the gauges, warning lights, controls and switches. Page reference numbers are listed next to each item.

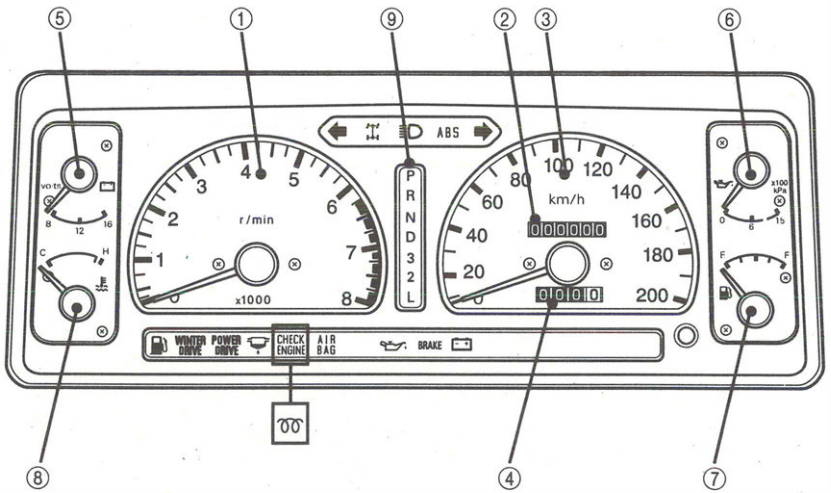
Page	
1-4	Gauges
1-6	Warning/reminder lights
1-10	Wipers and washers
1-11	Lights
1-11	Turn signals
1-12	Demister
1-12	Dimmer
1-12	Hazard
1-13	For lights
1-13	Diesel idling control knob
1-14	Horn
1-14	Tilt steering
1-14	Ignition
1-15	Ventilation, heating and air conditioning
1-18	Cruise control
1-21	Cigarettes
1-21	Radio
1-21	Glovebox
1-21	Clock
1-22	Bonnet release

LAYOUT

A Glovebox 1-21
B Clock (if fitted) 1-21
C Rear window demister 1-12
D Rear wiper and washer 1-10
E Hazard flasher 1-12
F Cruise control 1-18
G Windscreen wipers/washers 1-10
H Indicator/warning lights 1-6
I Gauges 1-4
J Headlights, high/low beam and turn signals 1-11
K Automatic transmission warning lights 1-9
L Instrument dimmer 1-12
M Headlight wipers/washers (if fitted) 1-10
N Fog lights (if fitted) 1-13
O Bonnet release 1-23
P Diesel Idling control 1-13
Q Ignition/starter switch 1-14
R Horn 1-14
S Tilt steering 1-14
T Cigarette lighter 1-21
U Heater controls 1-16
V Radio / cassette 1-21


A
B
C
D
E
F
G
H
I
J
K
L
M
N
V
U
T
S
R
Q
P
O

GAUGES



① Tachometer

The tachometer records engine speed in revolutions per minute (r.p.m.).

Continued or sustained operation in the RED zone could cause serious engine damage.

② Odometer

The odometer records the distance travelled since the vehicle was built.

③ Speedometer

The speedometer gauge indicates vehicle speed in kilometres per hour.

④ Tripmeter and reset knob

The tripmeter records kilometres travelled on a particular trip. Push the reset knob to reset the reading to zero.

⑤ Voltmeter

The voltmeter indicated the condition of the electrical charging system when the ignition is turned ON.

Needle movement to the extreme left side of the gauge indicates a 'too low' voltage condition, movement to the extreme right indicates a 'too high' voltage condition. In either case the electrical charging system will require checking. Normal voltage is indicated when the meter needle is within the grey line.

GAUGES

⑥ Oil pressure gauge

The oil pressure gauge indicates the pressure of oil in the engine. Normal oil pressure gauge reading can range from 100kpa at when the engine is hot and idling to more than 1000kpa when the engine is cold and accelerating.

The oil pressure varies greatly with the temperature and engine speed. Therefore, if the needle does not move at all, or will not move when the engine speed is increased, stop the engine immediately and check the oil level (after allowing approx. 5 minutes for the oil to settle). Refer Chapter 7 for oil level checking information.

Do not run the engine with low oil pressure as this could lead to serious engine damage. If the oil level is normal, have the system checked at your nearest Holden Dealer.

⑦ Fuel gauge

The fuel gauge indicates the approximate level of fuel within the fuel tank when the ignition is ON. "F" represents full (85 litres) and "E" represents empty.

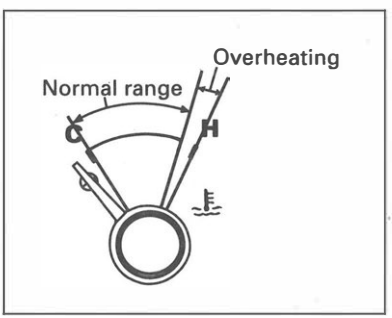
Note that due to movement of fuel in the tank, the needle may move during turns, stop and acceleration.

Refer to information on the inside of the rear cover of this Handbook when refuelling.

⑧ Temperature gauge

The temperature gauge indicates the engine coolant temperature when the ignition is ON. "C" represents cold, "H" represents hot.

If the needle moves to the extreme right (red area) of the gauge, an overheat condition is indicated. Refer Chapter 6 for overheating instructions, as continued operation of an over heated engine can result in serious engine damage.



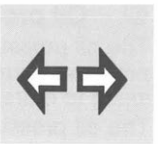
⑨ Automatic transmission indicator (if fitted)

Automatic transmission T-bar position is shown on the instrument panel, when the ignition is turned to ON.

Park, **N**eutral, **D**rive, **3**, **2**, and **L** are indicated with a green light. **R**everse is indicated with an orange light, designed to remind you to ensure that the vehicle is brought to a complete stop before moving the T-bar to a forward gear position.

WARNING LIGHTS

Turn signal

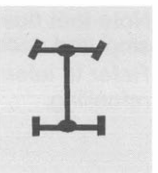


The appropriate green arrow will continuously flash while the lever on the right side of the steering column is moved and the key is turned to ON.
If the green arrow does not come on or if it does not flash, check the bulb and fuse.
NOTE: Both arrows will flash when the Hazard Warning Flashers are switched on.

Low fuel

If the light comes on when driving, it indicates that the fuel tank is nearly empty.
Due to movement of fuel in the fuel tank, driving on a winding road may cause the light to flicker on and off when the fuel level is getting low.

4 Wheel Drive

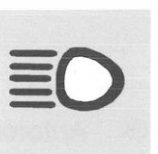


This light comes on when the ignition is turned to ON, until the engine is started. The light will also be displayed when driving, with the transfer lever is shifted into 4H or 4L position. Note that this does not necessarily mean that the vehicle is driving in 4 wheel drive, refer Chapter 4.

Oil pressure

To check that the bulb is working, this light comes on when the key is turned to ON - before the engine is started.
Occasionally the light may flicker momentarily when the engine is running. This does not indicate a system problem. However, if the light remains on during normal engine operation it indicates that the oil pressure is dangerously low. Stop immediately and check the engine oil level. If the level is normal, have the system checked at your nearest Holden Dealer. Do not run the engine with this light on, as this could lead to serious engine damage.

High beam



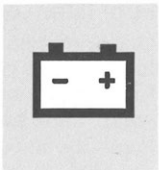
This light is displayed when the headlight high beams are in use.

Air bag (if fitted)

To check that the bulb and system is working the AIR BAG light will blink 7 times when the ignition is turned to ON.
If the symbol is displayed while driving it indicates that the air bag system may not inflate in an accident and you should see your Holden Dealer.

WARNING LIGHTS cont.

Battery



To check that the bulb is working, this light is displayed when the key is turned to ON - until the engine is started.

Note that the light may stay on when the engine is idling but should go out when the engine speeds up. If the light comes on while driving a state of "low charge" is indicated. This should immediately be seen to - check for a loose or broken drive belt.

Brake

BRAKE

This light will come on when the park brake is applied and the key is turned ON. The light only indicates whether the lever is up or down, not how well the park brake is applied - always pull the lever as far up as possible. Never drive with the park brake applied.

If this light comes on when you are driving (and the park brake lever is fully down) it indicates that a fault is detected in the brake system. Pull off the road and stop carefully. Remember that

- stopping distances may be longer,
- that you may have to push harder on the brake pedal
- that the brake pedal may go down more than usual.

Check the brake fluid level in the master cylinder. Refer Chapter 7 for information. Note that the warning light does not eliminate the need for the weekly brake fluid level check.

For your safety the vehicle should not be driven when the light is on.

Diesel only

If your vehicle has a diesel engine then the light (coming on while driving) could indicate low brake vacuum. Note that depressing the brake pedal repeatedly may cause the brake warning light to come on when the engine is idling. This is because more vacuum is being used than being created. The light should go out when the engine speeds up. If it does not it indicates a fault in the system and you should not continue driving.

Check engine (petrol only)

CHECK ENGINE

Your vehicle is fitted with an Electronic Engine Management System.

To check that the bulb is working, the light comes on when the key is turned to ON, before the engine is started (the light will stay on for a short time after the engine starts).

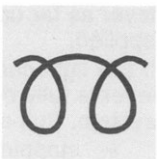
If the CHECK ENGINE light comes on whilst driving (either intermittently or continuously) it indicates that a fault has been detected in the Engine Management System. Although the vehicle may still be driveable and does not require towing, see your Holden Dealer as soon as possible for an inspection of the System, as continued driving could affect fuel consumption and engine performance.

WARNING LIGHTS cont.

Fuel filter (diesel only)

Under certain circumstances water may be taken into the fuel tank, and to prevent water from reaching the vital parts of the fuel system a water separator is installed. When the level of water trapped within the water separator reaches the specified level, the indicator light comes on. If the light comes on and remains on while the engine is running, it indicates the need for draining the water separator, refer Chapter 6.

Glow plug (diesel only)



Your diesel engine has a special starting system. Turning the key to ON starts the system and turns on the indicator light.

When the glow plugs have heated the engine enough for it to start, the light will go out. This tells you the engine is ready to be started. Waiting time varies considerably with engine and air temperatures.

Anti lock brake system (if fitted)

To check that the bulb is working, this symbol lights up and goes out when starting the engine.

If the light comes on while driving, carefully stop the vehicle and turn off the engine. Then restart the engine to reactivate the system. If the lights stays on or illuminates again while driving you should have the system checked by a Holden Dealer. Note that this light only means that the *anti lock* system is not operating - your vehicle's brake system will still operate conventionally. Refer Chapter 4.

Power drive (auto trans. only)

The POWER DRIVE light will come on when the engine is running and 'power drive' selected, refer Chapter 4.

Winter drive (auto trans only)

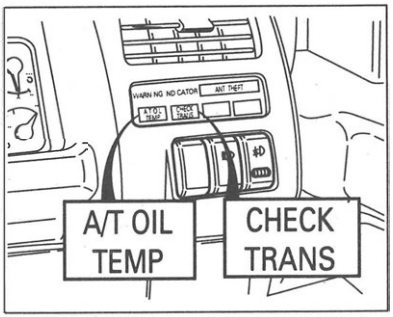
The WINTER DRIVE light will come on when the engine is running, 'winter drive' is selected and the transmission T-Bar lever is in "D", refer Chapter 4.

WARNING LIGHTS cont.

Check Trans (auto transmission only)

To check that the bulb is working, this light is displayed when the key is turned to ON.

Note that if the light flashes it means that the computer controlling the transmission has found a problem. The vehicle can still be driven when the light is flashing, but the computer may put the transmission into 'safety mode' (refer Chapter 4) - the transmission should be checked by your Holden Dealer as soon as possible.



Automatic transmission oil temp (auto transmission only)

The indicator light should turn on when the ignition switch is turned to the ON position, but should go out after a few seconds.

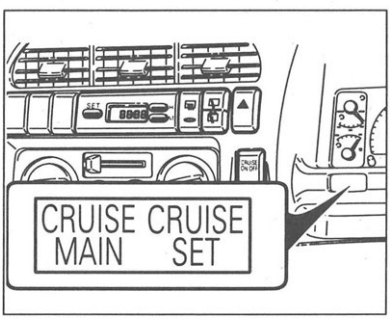
If the light comes on while driving it indicates that the automatic transmission fluid temperature is high.

You should stop as soon as it is safe to do so, leave the engine idling and the T-bar lever in "P". If the light does go out then you may resume driving. If the light does not go out you should have the transmission checked by a Holden Dealer as soon as possible.

Note that if the light comes on while you are driving at high speed, ensure that the transfer lever is set to 2H and the *free* wheel hubs are set in the *free* position, refer chapter 4, "Driving".

Cruise main (if fitted)

The CRUISE MAIN light will come on when the cruise control switch is turned to the ON position, refer CRUISE CONTROL, later in this Chapter.



Cruise set (if fitted)

The CRUISE SET light will come on when the cruise control is maintaining vehicle speed, refer CRUISE CONTROL, later in this Chapter.

WIPERS AND WASHERS

NOTE: Wipers and washers are operational when the key is turned to ON.

Windscreen wiper and washers

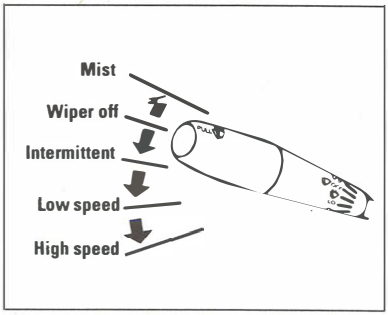
The windscreen wipers and washers are controlled by the lever located on the left of the steering column.

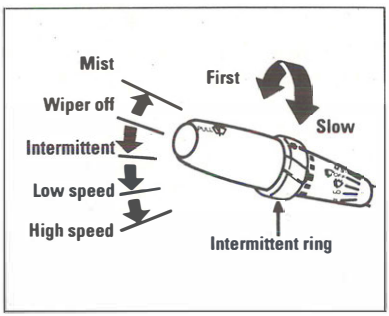
Do not operate the wipers if the windscreen glass is dry as they may scratch the glass. To obtain a spray of water onto the glass, pull the lever towards you and hold as long as required.

When the lever is shifted down to the INT position, the wipers operate every 3 to 4 seconds. When the lever is moved past the INT position to the LO position the wipers operate at normal, low speed. When the lever is moved to the HI position they will sweep at high speed. If the lever is moved upwards, past the OFF position to MIST, the wipers will operate only as long as the lever is held up.

Always clear ice or snow from the wiper blades before using the wipers.

Variable intermittent (if fitted) The frequency of intermittent wipe can be varied by moving the intermittent ring when the lever is in the INT position. The time between wipe swings can be adjusted between 2 and 20 seconds, approximately.

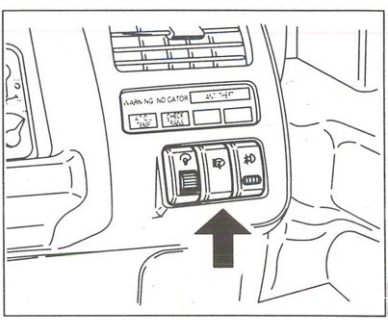




Headlight washers and wipers (if fitted)

The wiper/washer switch is located on the instrument panel, to the right of the steering column.

The washers and wipers operate for a short time whenever the switch is pressed.

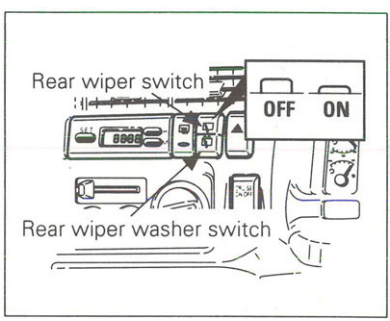


Rear wiper and washer

The rear wipe/wash switch is located on the instrument panel, to the left of the steering column.

Do not operate the wiper when the window is dry. It may scratch the glass. Do not operate the wiper if it is caked with snow or frozen as it may damage the wiper system.

To turn the intermittent speed wiper on, push the wiper switch. Push the wiper switch again to turn the wiper off. To wash and wipe simultaneously, push the washer switch. The washer and wiper will operate only as long as the switch is held in.



HEADLIGHTS AND TURN SIGNALS

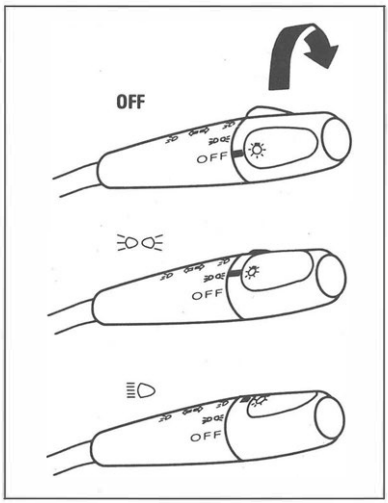
Park lights/head lights

The lever controlling the lights is located on the right of the steering column.

Rotate the end of the lever to the first 'stop' to turn on the park, tail, rear licence and instrument panel lights. Turning the knob further, to the second stop, also turns on the headlights.

A buzzer will sound when the key is in either the "ACC", "OFF" or "LOCK" position and the driver's door is opened with the headlight switch in the "ON" position. This will remind you to turn the headlights off.

Never leave the headlights on for any length of time when the engine is not running or you will flatten the battery.



Headlight high/low beam

With the headlights on, pull the lever towards you, until you feel a click, then release. The headlights will change between low and high beam, or vice versa. When the high beams are in use, a blue light on the instrument panel will glow.

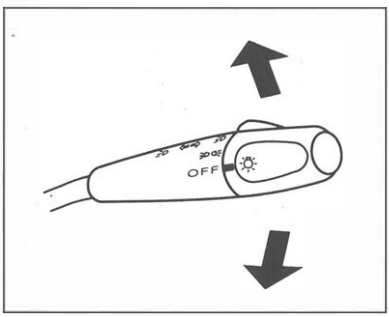
It is also possible to flash the high beams for signalling purposes (even if the headlights and/or ignition are switched off) by pulling the lever towards you; the lights will remain in high-beam as long as the lever is held. Note that this also changes the headlights between high and low beam when the lever is released.

Turn signals

Push the lever up to signal a left turn and down to signal a right turn. The lever will return to the neutral position when the turn is completed.

In some turns (such as changing lanes) the steering wheel is not turned far enough to cancel the turn signal. So, to indicate a lane change, move the lever part way and hold. The lever will return to the neutral position when released.

A green arrow on the instrument panel will flash when the lights are in operation.



DEMISTER, DIMMER AND HAZARD

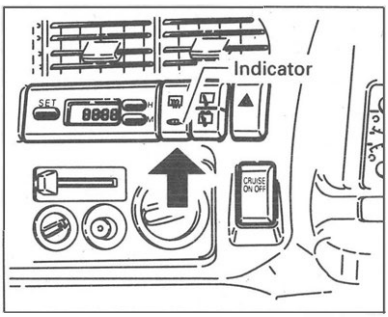
Rear window demister

The demister switch is located on the instrument panel, to the left of the steering column.

Depress the switch to turn on the rear window demister. The indicator light in the switch glows when the demister is in use, i.e. ignition and demister turned ON.

To avoid flattening the battery, turn the demister off by re-pressing the switch when the window becomes clear.

On some models an automatic timer will turn off the demister after 30 minutes.

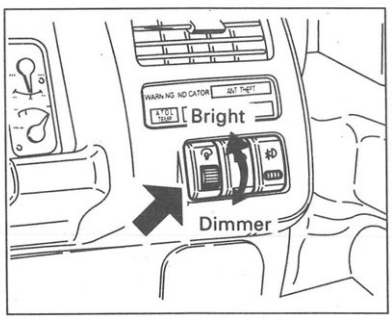


Instrument dimmer

The instrument lights turn on when the park or headlights are turned on.

Brightness of the instruments is controlled by the thumb wheel, located to the right of the instruments.

Turn the wheel up for brighter, down for dimmer.



Hazard warning flasher

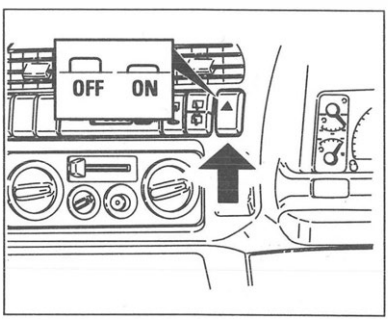
The red hazard knob is located to the left of the instruments.

Turn on the hazard warning flasher (regardless of the ignition key position) by pushing the knob.

To turn off, push the knob again.

Use the hazard warning flasher to warn other drivers any time your vehicle becomes a traffic hazard, day or night.

USE OF THE HAZARD WARNING SYSTEM WHILE THE VEHICLE IS MOVING IS PROHIBITED BY LAW IN SOME STATES.

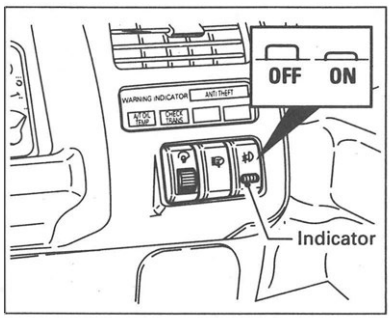


FOG LIGHTS, DIESEL IDLE CONTROL KNOB

Fog lights (if fitted)

When fog or heavy mist reduce vision, push this switch to turn the fog lights on.

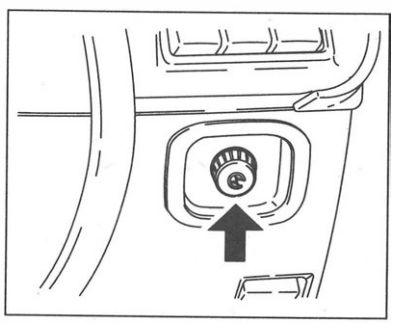
The fog lights will operate separately to the headlights. The indicator light in the switch glows when the fog lights are in use.



Diesel idling control knob

The idling control knob is located on the instrument panel, to the right of the steering column.

Turning the knob clockwise after cold engine starting will increase idling speed, thereby providing a smoother cold engine idle. Remember to return the knob to the home position after the engine has warmed up.



HORN, TILT STEERING, IGNITION

Horn

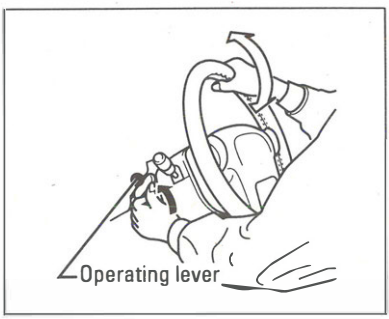
The horn is activated when one of the pads, located on either side of the steering wheel, is pressed.

Tilt steering (if fitted)

The tilt steering lever is on the left side of the steering column.

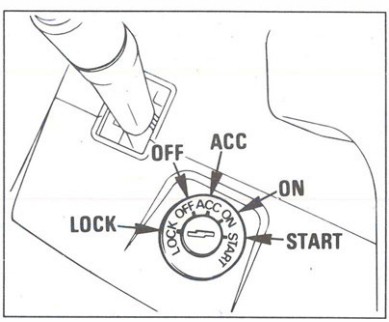
To adjust, lift the lever to unlock the steering column. Move the wheel up or down, as required, and lock the lever firmly. Then, try moving the wheel up and down to ensure it is securely locked. The tilt steering wheel adjustment lever has 6 adjustment positions.

For your safety, do not adjust tilt steering while driving.



Ignition / starter switch

LOCK Normal parking position. Accessories and engine are off. This position locks the ignition and steering when the key is removed. The key can only be removed at this position. To release the steering lock, insert the key into the switch and turn it to "OFF" or other positions. If you have trouble turning the key to unlock the steering, turn the steering slightly to the right or left while twisting the key clockwise.



OFF The engine and accessories can be turned off without locking the steering.

ACC (accessories) The engine is off but accessories such as the radio still operate. To avoid flattening the battery, avoid excessive use of accessories when the engine is not running.

ON This is the position at which the engine is ready to start and all electrical systems are active. Do not leave the switch in the "ON" position for a prolonged period, unless the engine is running, otherwise the battery will discharge.

START This is the position for starting the engine. The key should be released from this position as soon as the engine starts.

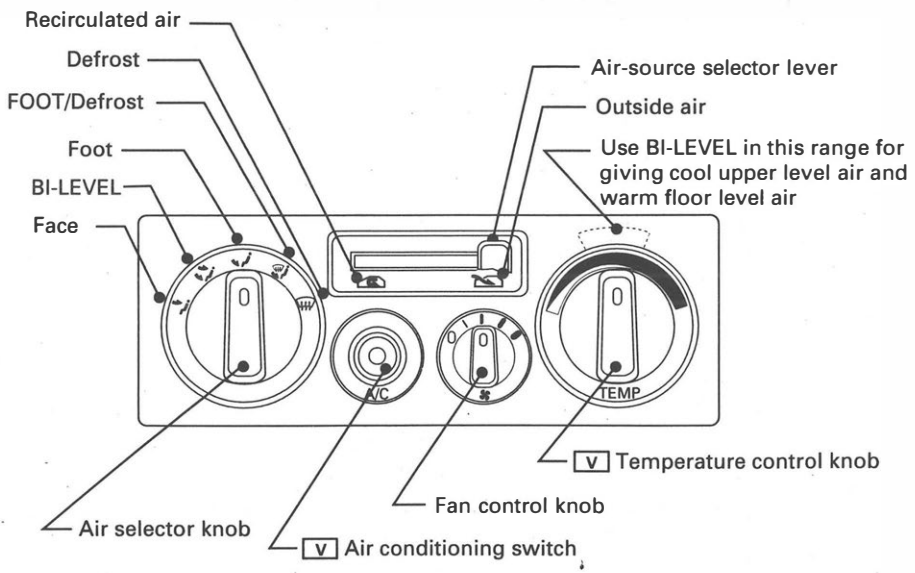
CAUTION: Do not turn the engine off while the vehicle is in motion as this renders ineffective any power assisted equipment (such as brakes or steering) operated by the engine. Never remove the key while the vehicle is in motion as this will lock the steering of the vehicle.

VENTILATION SYSTEM

The vehicle features a flow-through ventilation system for your comfort. Under reasonable conditions, it shouldn't be necessary to open the windows at any time. Fresh air (when selected by the Air Source Lever) is drawn into the vehicle through the grilles in front of the windscreen. Do not allow them to become clogged with debris, such as leaves or snow.

Outlets

The five upper face level outlets, located in the dash, have adjustable vanes which may be swivelled up/down and left/right to allow directional control of air flow. Knee level outlets are vertically adjustable. The other outlets are fixed, as these direct air to the windscreen or feet in the best possible way.



HEATER CONTROLS

Air conditioning switch (if fitted)

Push the switch to turn on the air conditioning. The indicator light in the switch glows when the air conditioning is operating. Note that the fan must be switched to 1 or greater for the air conditioning to work.

Push the switch again to turn off the air conditioning and achieve better fuel consumption.

Fan knob

The fan knob provides speed control of the blower fan: 0 (off), 1, 2, 3, 4.

Temperature knob

The temperature knob regulates the temperature of the air entering the passenger compartment. Turn the knob clockwise for warmer air, anti-clockwise for cooler air.

Air source lever

Re-circulated or outside air intake can be selected with the Air Source Lever. The re-circulation position should be used (with the windows closed) when outside air is not wanted, as when driving in dusty conditions.

However, the re-circulate position should not be used for extended periods of time, as no outside air is admitted into the vehicle.

Outlets selector knob

The air selector knob allows you to select different outlet combinations for the air entering the cabin of the vehicle.

Air is delivered from the face level outlets.

Provided the temperature knob is moved away from extreme hot or extreme cold, cooler air is delivered from the face outlets and warmer air from the feet outlets. This position is useful in cool weather with bright sunshine.

Air is deliver from the floor outlets.

Air is delivered from the demister and floor outlets.

Air is delivered from the demister outlets.

AIR CONDITIONING (if fitted)

Hot weather

For a "quick cool down" when first entering the vehicle on a hot day, switch on the air conditioner, select *re-circulate*, move the temperature knob to full cold and turn the fan to a high speed. Also open the windows to allow the hot air to escape. Close the windows after a minute or two as the air conditioning works more effectively with the windows up.

It is recommended that when the interior cools down (approximately 10 to 20 minutes) to select outside air (rather than re-circulate) to achieve and maintain best comfort conditions during extended driving.

The coolest temperature however, is achieved when *re-circulate* is selected. This can be used in slow city traffic or when the vehicle is stationary in very hot weather. Occasionally select *face* or *face and foot* to allow outside air to enter the vehicle.

Dust

When following another vehicle on dusty roads, or to prevent exhaust fumes or odours from entry into your vehicle, select the re-circulate position of the air source lever and make sure windows are closed.

When driving on un-sealed roads but where the dust is not airborne, use the fresh air setting of the air source lever (with the windows closed) and the fan preferably on a high speed so that positive air pressure in the vehicle will prevent any dust entry.

Cold weather

The air conditioner also removes moisture from the air. By moving the temperature knob away from extreme cold ensures that the air will be reheated after it has been purified.

Therefore, if the side windows or windscreen fog up on a cold day, switch on the air conditioner, turn the fan knob to a high speed, select 'demist' and select a warm setting with the temperature knob. This will circulate warm, dehumidified air throughout the vehicle, defogging the windows.

Fuel consumption

When air conditioning is not needed, remember to turn the air conditioner off, as this will reduce fuel consumption.

Automatic transmission

If your vehicle is stopped for long periods in hot weather with the engine running and the air conditioner operating, select N (neutral) or P (park).

Important

Once every two weeks, with the engine running, switch the air conditioner on for 5 to 10 minutes, even in Winter. This will lubricate the air conditioning system and prevent the seals from drying out.

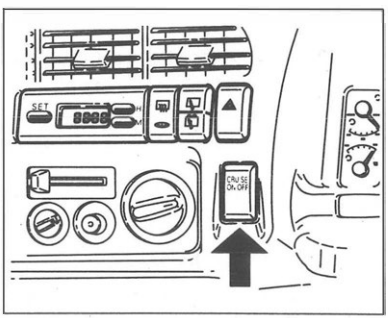
CRUISE CONTROL (if fitted)

The cruise control can keep the vehicle at a constant speed, so that the driver does not have to use the accelerator pedal.
This is useful when driving on an open road where frequent deceleration and acceleration are not required. The cruise control speed cannot be set below 40 km/h For your safety, do not use the cruise control when driving in heavy traffic or winding roads.

SETTING A DESIRED SPEED

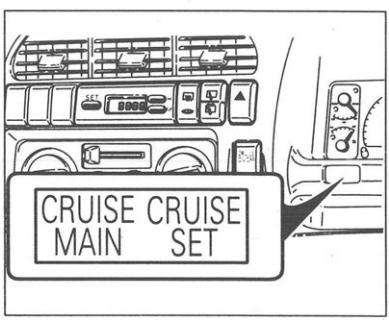
Push the top part of the main cruise control switch; the CRUISE MAIN light on the instrument panel will come on. This light indicates that the cruise control is ready.

Use the accelerator pedal to gain required speed and push (once) the set/coast button on the end of the cruise control lever. You can then remove your foot from the accelerator pedal. The vehicle speed will then be maintained by the cruise control; the CRUISE SET light on the instrument panel will also come on, to indicate that the cruise control is now maintaining vehicle speed.



ACCELERATING

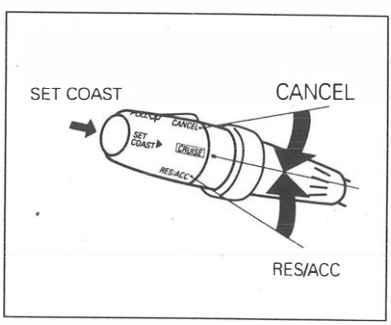
If you wish for a short burst of speed (passing a car) use the accelerator pedal. When you take your foot off the pedal, the vehicle will slow down to the speed set before passing.



RESETTING TO HIGHER SPEED

If you wish to increase the cruise control speed you may either:-

(a) rotate the end of the lever to *resume/accel* for less than 1 second. This is known as 'tap up'. Each time you rotate the switch to this position for less than one second the cruise control speed will increase by 1.6 km/h. Tap ups are limited to 10 consecutive times.



CRUISE CONTROL (if fitted)

(b) rotate the end of the lever to *resume/accel* and hold for more than one second. The cruise control speed will increase until you release the lever.

(c) use the accelerator pedal to increase vehicle speed, push in the *set/coast* button on the very end of the lever (for less than one second) then release.

RESETTING TO A LOWER SPEED

If you wish to decrease the cruise control speed you may either:-

(a) depress the *set/coast* button for less than one second. This is known as 'tap down'. Each time you depress this button the cruise control speed will decrease by 1.6km/h. If you tap down to lower than 40 km/h the cruise control will be disconnected.

(b) depress and hold the *set/coast* button. Wait until the vehicle slows to the desire speed, then release the button. If you coast down to lower than 40 km/h the cruise control will be disconnected.

STOPPING CRUISE CONTROL

If, while the vehicle speed is maintained by the cruise control, you:

(a) depress the brake pedal

(b) depress the clutch pedal (manual transmission)

(c) shift the transmission lever to N (automatic transmission)

(d) turn the end of the cruise control lever to the CANCEL position

(e) use the *set/coast* button to bring cruise control speed below 19 km/h

(f) when cruising speed is lower than preset speed by 19km/h the cruise control will stop controlling the vehicle speed. However, the memory will store the last set speed. To resume this speed, use the accelerator pedal to bring vehicle speed to at least 40 km/h, then rotate the end of the cruise control lever to *resume/accel* for less than one second. Note: if the switch is held for more than one second the memory will be erased and the cruise control will be in the *accel* mode (the speed will increase until you release the switch).

To completely switch off the cruise control you may either:-

(a) depress the lower part of the main switch to the OFF position

(b) depress the *set/coast* button and turn the end of the lever to the *resume/accel* position at the same time

(c) turn the ignition key to OFF

(d) or if the cruise control system senses trouble in the system
Note that when going up steep hills it may be difficult for the cruise control to maintain a constant speed, in which case if may cancel itself.

CRUISE CONTROL (if fitted)

WARNING

DO NOT USE THE CRUISE CONTROL WHEN ROAD OR DRIVING CONDITIONS COULD REQUIRE VARYING SPEEDS. A CONSTANT SPEED MAY NOT BE PRACTICAL IN HEAVY OR VARYING TRAFFIC, OR ON WINDING, SLIPPERY OR ROUGH ROADS. KEEP THE MAIN SWITCH IN THE OFF POSITION UNLESS USING THE CRUISE CONTROL.

WITH MANUAL TRANSMISSIONS, NEVER ATTEMPT TO MOVE THE GEAR LEVER WITHOUT USING THE CLUTCH PEDAL WHILE THE CRUISE CONTROL IS MAINTAINING VEHICLE SPEED. ENGINE OVER-REVVING AND DAMAGE MAY RESULT.

REMEMBER THAT TAKING YOUR FOOT OFF THE ACCELERATOR WHEN THE CRUISE CONTROL IS ENGAGED WILL NOT REDUCE VEHICLE SPEED. WHEN GOING UP OR DOWN HILLS (PARTICULARLY WHEN TOWING) IT IS POSSIBLE FOR THE VEHICLE TO GAIN OR LOSE SPEED, EVEN THOUGH THE CRUISE CONTROL IS ENGAGED. IF THIS HAPPENS WHILE GOING UP HILL, MERELY DEPRESS THE ACCELERATOR PEDAL TO MAINTAIN THE SPEED DESIRED. IF GOING DOWN A HILL, STEEP ENOUGH TO CAUSE THE VEHICLE TO GAIN SPEED, DEPRESS THE BRAKE PEDAL, WHICH WILL BOTH DISENGAGE THE CRUISE CONTROL AND SLOW THE VEHICLE DOWN.

IF A MALFUNCTION HAS DEVELOPED IN THE CRUISE CONTROL SYSTEM, HAVE THE SYSTEM CHECKED AND CORRECTED AS SOON AS POSSIBLE BY A HOLDEN DEALER.

CIGARETTES, GLOVEBOX, RADIO, CLOCK

Cigarette lighter

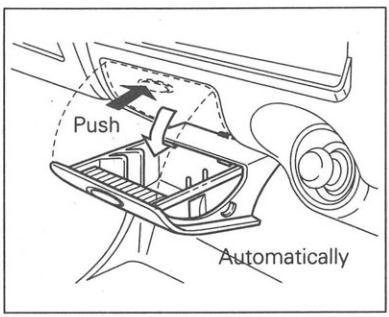
Located beneath the heater, the cigarette lighter is operational with the key in either the ON or ACC positions. To use, press in the lighter knob. When the element is hot the lighter will automatically pop out, ready for use.

To avoid damage to the lighter, don't hold the lighter pushed in by hand.

Ash tray

The front ash tray is located to the left of the cigarette lighter. Push the ashtray to open; it will slide open automatically. Push back in again to close. It is recommended that the ashtray be closed after use and that it be regularly cleaned out, by opening and pulling out the tray.

Refer Chapter 2 for rear ash trays.



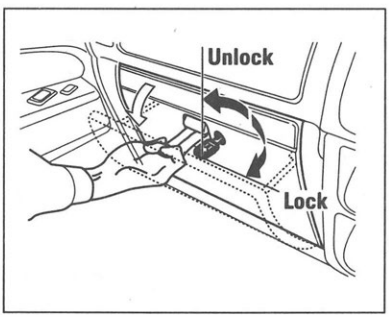
Glovebox

The glovebox can be opened by pulling the handle. Push the lid shut to close.

To lock, turn the key clockwise, to unlock, turn the key anti-clockwise to the vertical position.

To unlock and open at the same time, turn the key anti-clockwise, past the vertical position.

The key must be vertical in the lock in order to withdraw the key and leave the glovebox unlocked.



Radio / cassette

Refer to the operating instruction supplement in your glovebox for all information relating to the operation of your radio/cassette.

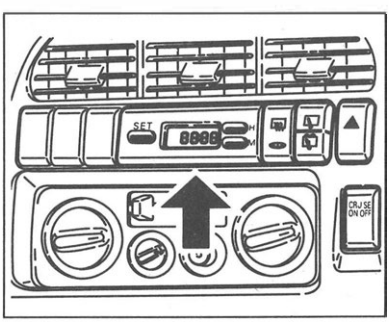
Clock (if fitted)

Time is displayed when the key is turned to *ON* or *ACCESSORIES*.

H Hour display is advanced rapidly while this button is held de-pressed or display increases by one hour each time the button is pressed.

M Minute display is advanced rapidly while this button is held de-pressed or display increases by one minute each time the button is pressed.

SET When the SET button is pressed the time is rounded off to the closest hour.



BONNET RELEASE

To open the bonnet, pull the lever inside the vehicle (beneath the dash) towards you.

This allows the bonnet to release but is prevented from opening by the safety catch. To open completely, reach in under the centre of the bonnet and squeeze the safety catch upwards. Fully open the bonnet and insert the support rod in the slot provided. For closing, return the support rod to its resting position and lower bonnet gradually to be finally dropped under its own weight.

Always check to be sure that the bonnet is closed by attempting to lift the bonnet.

Notes

CHAPTER 2

Locks

Page	
2-2	Keys
2-2	Fuel filler lock
2-2	Spare wheel lock
2-3	Door locks
2-3	Child proof door locks
2-4	Tailgate lock
2-5	Anti theft lock

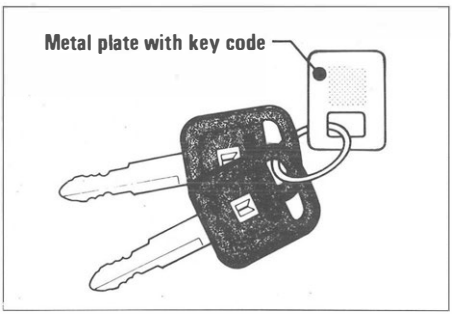
KEYS & LOCKS

Keys

Two keys are provided with the vehicle. The key code number is stamped on the metal plate attached to the key.

For vehicle security, remove the metal plate and keep the number in a safe place - NOT IN THE VEHICLE.

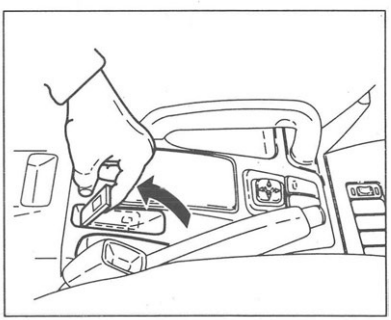
In the event of the original keys being lost a duplicate can be made by your Holden Dealer, using your key code number.



Fuel filler release

To release the fuel filler flap, pull up the lever located between the front seats.

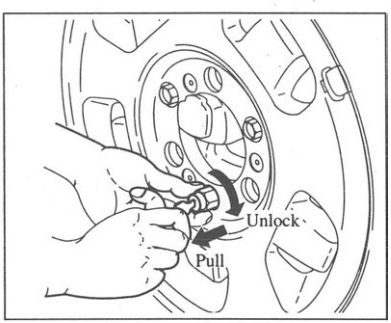
Refer to information on the inside of the rear cover of this Handbook when refuelling.



Spare wheel lock (if fitted)

To unlock: Insert the key into the wheel lock. Grip the wheel lock with your hand. Turn the key clockwise while pulling out the wheel lock. The wheel lock comes out and is released.

To lock: Insert the key into the wheel lock and push into place. Then, turn the key anti-clockwise while pulling out.



DOOR LOCKS

Manual (side doors and rear door)

When leaving the vehicle:

- Doors can be locked or unlocked with the ignition key. To open doors, unlock with key then pull out the door handle.
- To lock doors without using the key, push down the lock button (inside the vehicle) then close the door while holding out the door handle.

When remaining inside the vehicle:

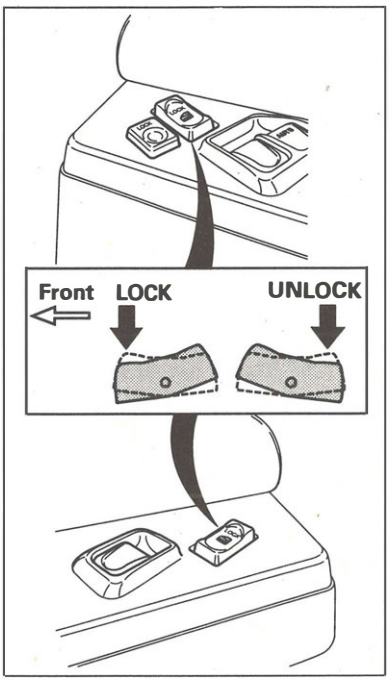
- Push the lock button down to lock the door, pull up to unlock.

Electric (if fitted)

All doors (all side and tailgate) will unlock and lock simultaneously when either front door is locked or unlocked with the key from outside.

All doors will lock and unlock when the driver's snib lock button or the armrest lock button is used.

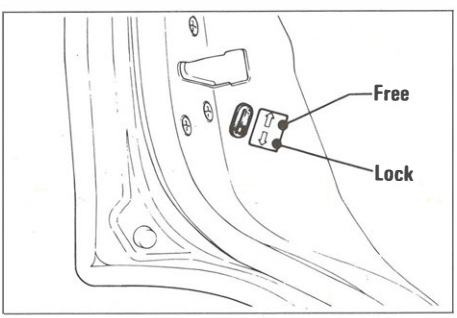
Using the front passenger's snib lock button will not affect the other doors.



Child proof (if fitted)

This added safety is built into the two rear passenger doors. To operate, push the lever down as far as it will go and close the door. The door cannot now be opened from inside, regardless of the lock button position. To disengage, open the door from outside and push the lever up as far and is will go.

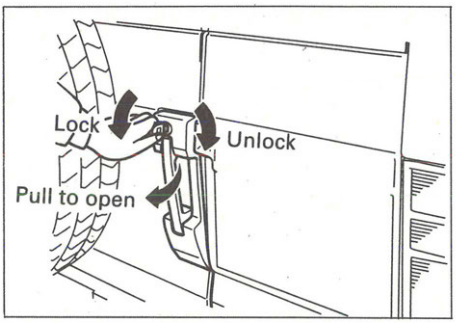
CAUTION: For safety, you should check that the lock is operating correctly, after setting, by attempting to open the door from the inside.



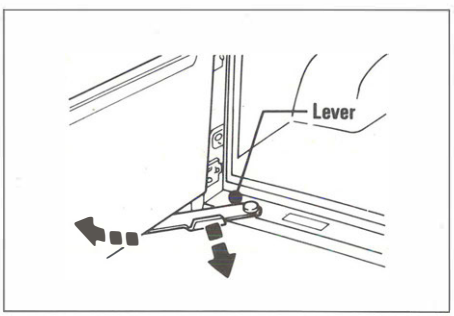
TAILGATE LOCKS

The tailgate may be locked or unlocked in the same way as the side doors, either with the ignition key or the lock button.

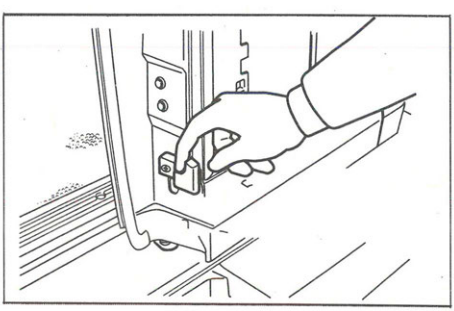
If electric locking is fitted, the tailgate will lock and unlock in conjunction with the side doors, refer previous page.



When opening the left side of the tailgate, pull out until the lever locks in position.

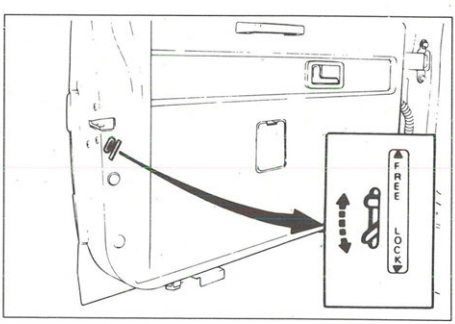


To close, push the tailgate out slightly and pull the lever towards you.



The child proof safety lock is built into the tailgate. To operate, push the lever down as far as it will go and close the tailgate. The tailgate cannot now be opened from inside, regardless of the lock button position. To disengage, open the tailgate from outside and push the lever up as far and is will go.

CAUTION: For safety, you should check that the lock is operating correctly, after setting, by attempting to open the tailgate from the inside.



ANTI THEFT (if fitted)

When the vehicle doors, tailgate and bonnet are locked, the anti-theft alarm system is designed to protect your vehicle and valuables from theft.

Any attempt to forcibly open a door, the tailgate or bonnet without using the ignition key will cause the horn to beep for 30 seconds. The ignition/starter will also be disabled. If the anti theft system is *not* switched off while the alarm is sounding the system will automatically switch off after 30 seconds - to avoid flattening the battery. For further theft control the anti theft system will have to be re-activated.

To activate the system

1. After ensuring the bonnet is closed, lock all doors (and tailgate) with the ignition key.

   The ANTI-THEFT light on the dash will come on.

2. After approx. 10 seconds, the ANTI-THEFT light will switch off - the system is now in operation.

To deactivate the system

Unlock the doors or tailgate with the ignition key

or

insert the ignition key in the ignition/starter and turn the switch to ACC position.

The alarm is triggered...

- If someone attempts to open a door without using the key.
- If someone forcibly attempts to pry open a door, tailgate or bonnet.
- If someone forcibly attempts to remove a door lock cylinder.
- If someone unlocks a door with the door lock knob (e.g. they were locked inside the vehicle)
- If the bonnet release lever is moved.

Note: When the ignition key is turned to OFF, LOCK or is removed from the ignition, opening any door will cause the ANTI-THEFT light on the dash to flash as a *reminder* to lock the doors with the key. If ignored the light will switch off after 30 secs.

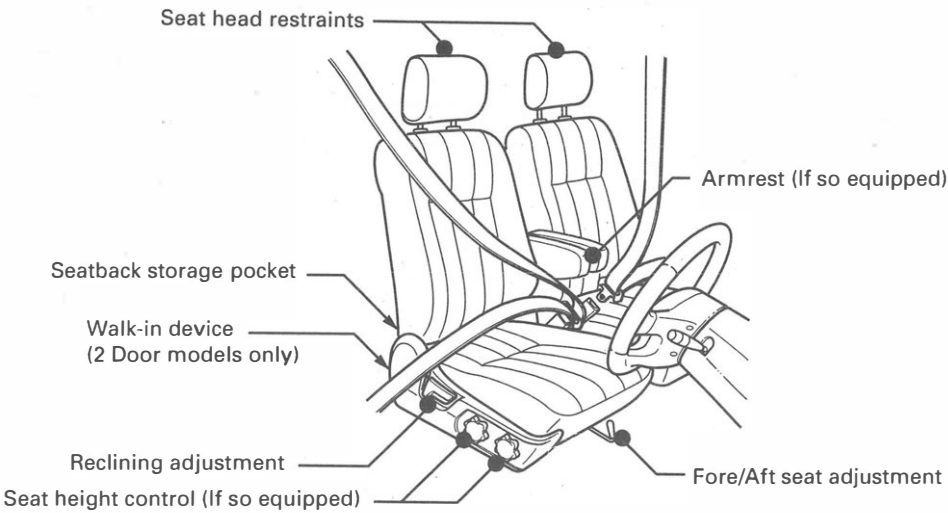
CHAPTER 3

Body features

Page

3-2 Seat adjustment
3-9 Seat belts
3-13 Manual mirrors
3-13 Manual windows
3-14 Electric windows
3-15 Electric mirrors
3-16 Interior light
3-17 Antenna
3-17 Foot rest
3-17 Assist grips
3-17 Ash tray
3-18 Cup holder
3-18 Console storage
3-18 Sun visors
3-18 Card holder
3-19 Sunroof
3-20 Park brake

FRONT SEAT ADJUSTMENT



Fore/aft

Turn the lever (at the front of the seat) to one side and move the seat forward or backwards as required. After adjusting the seat position, try to move the seat forward and backward to be sure the seat adjusters have been latched.

Do not adjust the driver's seat while the vehicle is moving.

Reclining

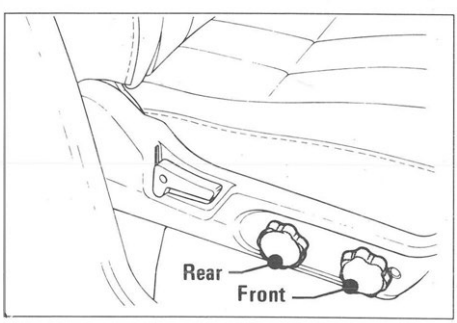
The angle of the back of the seat can be adjusted by raising the lever on the door side of the seat.

To avoid reducing the effectiveness of seat belts, seats should only be semi-reclined when the vehicle is moving. The fully reclined position should only be used when the vehicle is stationary.

Seat height control (if fitted)

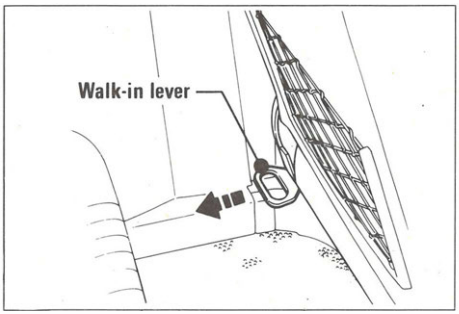
The two knobs on the door side of the seat control the height.

The front knob moves the front of the seat cushion up or down, the rear knob moves the rear of the seat cushion up or down.



FRONT SEAT ADJUSTMENT

Passenger seat (2 door models only)

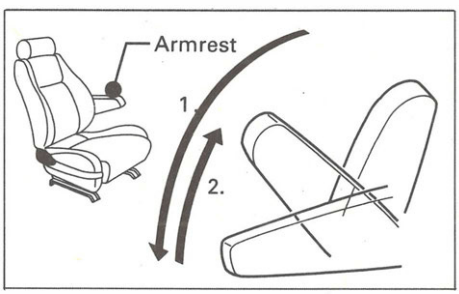


On the passenger side, the back of the seat slides all the way forward as the reclining lever is pulled up, making it easier for rear seat occupants to enter.

To exit the rear seat, pull the 'walk-in' lever, located on the back of the front passenger's seat

WARNING: To avoid injury, be sure that rear seat passengers keep their feet clear of the front seat when returning the front seat to its upright position. Carefully follow the instructions.

'Captain seat' armrest (if fitted)

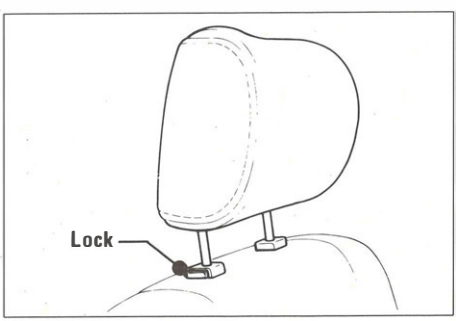


Armrests for the inner sides of the front seats may be used when horizontal or folded upwards vertically, when not required.

1. Lower the armrest all the way.
2. Raise the armrest a little at a time to adjust the angle to suit.

Raise the armrest before opening the centre console.

Head restraint

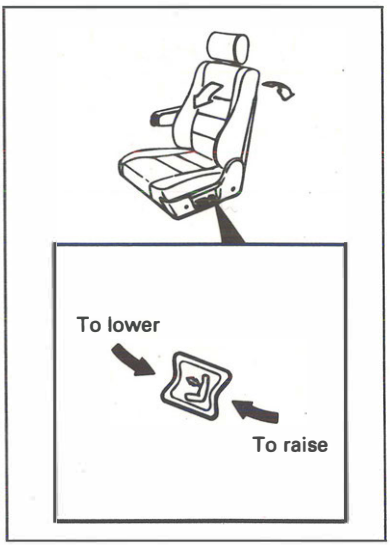


This safety feature is not intended as a head rest. It is solely for the reduction of possible injury that may result from a whiplash neck movement following a vehicle collision. Do not drive the vehicle with the head restraint removed.

Pull the head restraint up to raise the height. To lower the head restraint, first squeeze in the lock button.

POWER SEAT (if fitted)

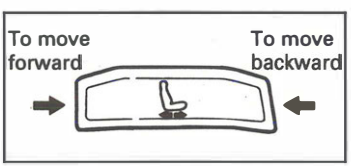
Ensure hands and feet are clear when adjusting the seats. Also ensure nothing is in the way of the seats when they are being adjusted, including seat belts and belt buckles. Do not adjust the driver's seat while the vehicle is moving.



Reclining (both front seats)

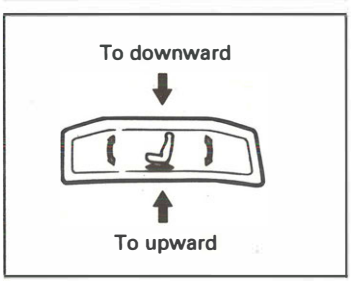
The seat backs can be tilted forward or backward by moving the switch as illustrated, located on the door side of each front seat.

To avoid reducing the effectiveness of seat belts, seats should only be semi-reclined when the vehicle is moving. The fully reclined position should only be used when the vehicle is stationary.



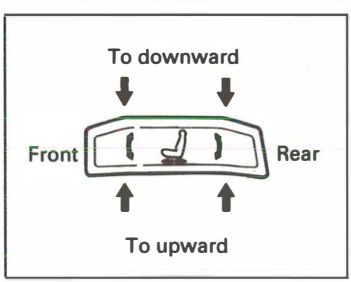
Fore / aft (both front seats)

Each front seat can be moved forwards or backwards with the switch on the door side of each front seat. Move the switch forwards or backwards as required.



Height control (driver's seat)

The driver's seat can be adjusted in height. Push the switch down to lower the seat or up to raise the seat.

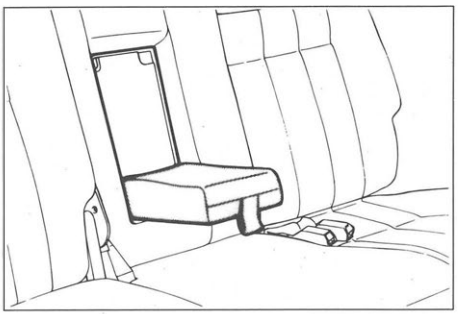


In addition, the front or rear part of the seat can be independently raised or lowered. Tilt the front of the switch up or down to raise or lower the height of the front part of the seat. Tilt the rear of the switch up or down to raise or lower the height of the rear part of the seat.

SEAT ADJUSTMENT

Rear seat armrest

On some models, a rear seat armrest is provided. Reach in and pull down the armrest if required.



Rear seat head restraint

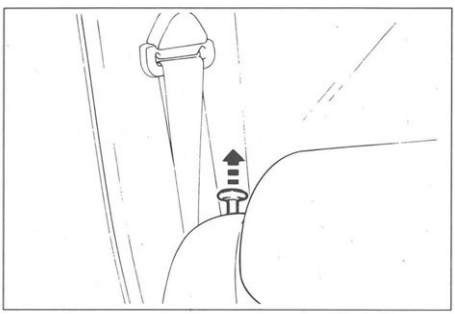
Some models are fitted with adjustable *rear* head restraints. Pull up or push down to adjust the height, as required.

Recline/incline rear seat (if fitted)

Pull up the release knob(s) and move the back of the seat forwards or backwards. Releasing the knob locks the seat in position.

On some models, the back of the seat may either be folded fully down or may be reclined back to one of 10 positions, anywhere from fully upright to 40° backwards.

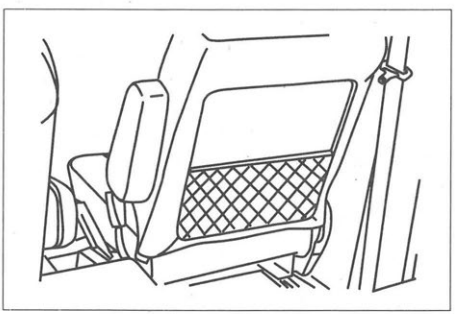
To avoid reducing the effectiveness of seat belts, seats should only be semi-reclined when the vehicle is moving. The fully reclined position should only be used when the vehicle is stationary.



Seat back storage pocket

The front seat back storage pocket is provided to store small items.

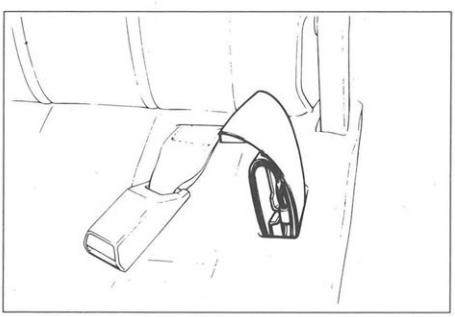
Whenever possible loose items should be secured, as they can become flying projectiles in accidents.



Buckle stowage (if fitted)

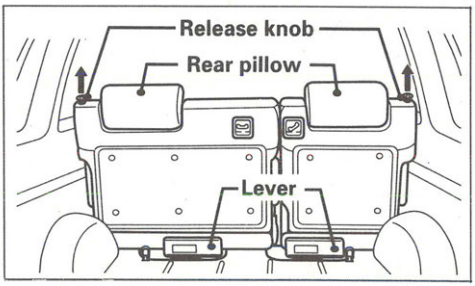
Some models are provided with stowage pockets in the sear seat to tuck away the rear seat belts.

Roll the seat belt webbing around the buckle and tuck into the hole.



FOLDING REAR SEAT

Folding seat back (if fitted)



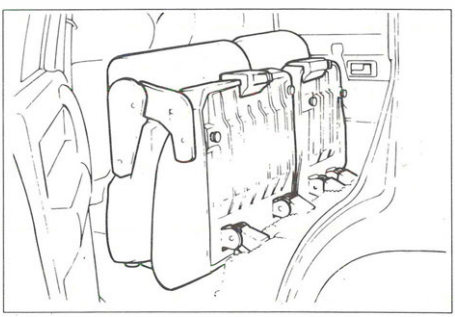
1. Ensure rear pillow is in the lowest position.
2. Ensure seat belts are out of the way.
3. Pull up the release knob on the top of the seat back.
4. Fold the back of the seat forwards.

   Note that some models have a split rear seat, which means that either one side or both sides of the seat back may be folded forwards. Remember to first tuck away the centre arm rest.

The release knob must be pulled up when returning the seat to the upright position.

WARNING: To avoid injury, be careful not to hit your head on the folded third seat, when and while sitting in the rear seat in its reclined position.

Converting rear seat

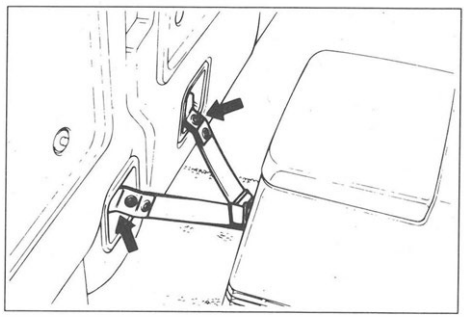


In addition to folding the back of the seats forward, with some models, the whole of the rear seat assembly may be folded forward. In addition, some models are fitted with split rear seats which allows you the option of converting either one or both sides of the seat.

1. Fold the back of the seat forward as described above.
2. Push down and undo the lever located at the back of the rear seat cushion. At the same time lift the rear seat and push forward, until in the vertical position.

FOLDING REAR SEAT cont.

3. Remove the cover at the rear of the console to reveal the anchor strap(s) that are attached to the rear of the console. Split seats have two bands (the shorter band is for the right seat, the longer band for the left), non-split seats have one band. Attach the free end of the band(s) to the clasp on the back of the seat back. The bands are adjustable in length.



Do not permit anyone to ride in the rear of the vehicle while the seat is folded down. All occupants should be properly restrained by a seat belt while the vehicle is moving.

After restoring seat to upright position, check to ensure seat is securely locked into place.

When folding the second seat, be sure not to fully open the centre console box.

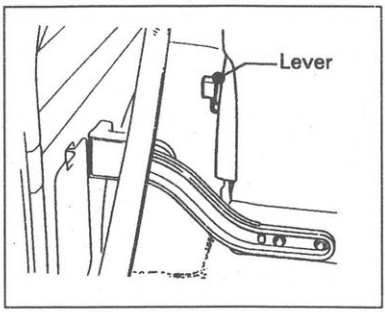
WARNING: To avoid injury, take care of your hands and feet when folding/ converting seats.

THIRD ROW SEATS (if fitted)

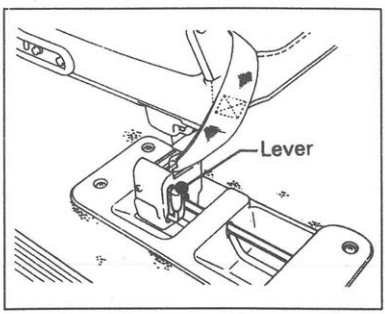
The third row seats are suitable for one person on each seat position; each position being supplied with its own seat belt. When not required for use one, or both seats, may be folded away to gain more space.
CAUTION: To avoid injury, take care of your hands and feet when folding/ unfolding seats. Carefully follow the instructions.

Folding

Push the lever at the side of the seat forward and at the same time, push the seat back to fold it down to the seat cushion.



Move the lever at the leg of the seat (where it attaches to the floor) down towards you, to unlock the seat leg.



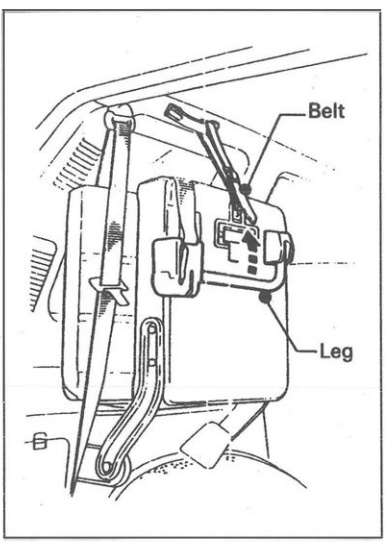
Fold the seat sideways, up towards the window and strap it tightly into the hand grip, folding the leg down flat against the seat.

Unfolding

Unfolding is reverse of folding away:

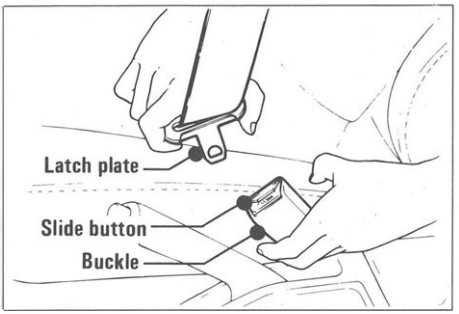
- undo the strap from the hand grip
- unfold the seat leg
- lower the seat and clip the leg firmly into floor
- move the lever on the side of the seat while returning the seat back to the upright position.

Always ensure the seat leg is firmly attached to the floor and the seat back is locked upright.



SEAT BELTS

Retractor belts



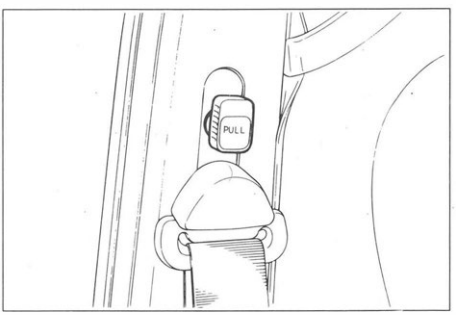
To put on a retractor seat belt, pull the latch plate across your body and clip it into the buckle. When the latch plate has locked safely into place you will hear a "click". After fastening, settle the belt by running your hand under the belt starting at the hip, go across to the buckle, then up under the sash. Any extra belt length will retract automatically.

The lap section should be worn as low as possible on your hips, not on your waist. Make sure the sash and lap sections of the seat belt are free from twists and are fitting firmly.

The emergency-locking retractor belt allows you to move freely while the vehicle is travelling normally. The belt will lock immediately on fast braking, impact with a solid object or any quick movement by the wearer.

To release the belt, press the slide button on the buckle and allow the belt to retract. Check that it fully retracts without twisting or turning.

Front seat belt - shoulder height adjust (if fitted)



The seat belt is anchored to the vehicle near your shoulder. The position of anchorage can be moved to different heights.

Pull the knob out and move the seat belt anchor up or down. Release the knob at required position and ensure that the anchor has clicked into position.

Short people should select a low anchor position, tall people a higher one. This will ensure, for both safety and comfort, that the webbing of the seat belt fits on the shoulder.

For your safety, the driver's side shoulder anchor should not be adjusted while the vehicle is in motion.

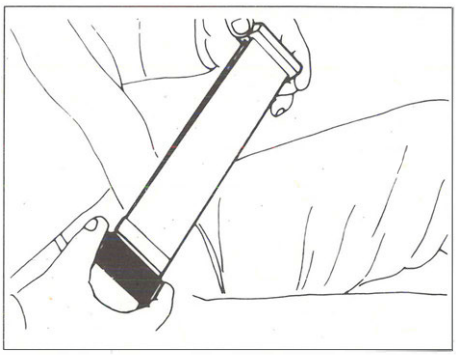
SEAT BELTS

Centre rear seat belt (if fitted)

The seat belt for the centre of the rear seat is non-retracting lap belt.

To fasten the seat belt, bring the latch plate across your body and clip it into the buckle. When the metal tongue has locked safely into place you will hear a "click". Make sure the belt is fitting firmly across the lower hip area and not across your waist. To release, press the slide button in the centre of the buckle.

To shorten or lengthen the seat belt: Tilt the latch plate at right angles to the seat belt webbing and pull the webbing through the belt adjuster as required.



Australian law requires that the driver and all passengers be properly restrained at all times with the seat belts provided in the car. Failure to do so could increase the chance of injury and/or the severity of injury in accidents.

Australian Design Rules: WARNINGS

Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.

Care should be taken to avoid contamination of the webbing with polishes, oil and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.

It is essential to replace the entire assembly after is has been worn in a severe impact, even if damage to the assembly is not obvious. Belts should not be worn with straps twisted.

Each seat belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.

No modification or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.

The positioning of the tongue restrictor must never interfere with, or stop, the belt from fully retracting.

SEAT BELTS

Infant and child restraints

CHILDREN SHOULD BE RESTRAINED AT ALL TIMES WHEN RIDING IN A MOTOR VEHICLE.

In some States it is law that children must be belted in, whenever they are travelling in a vehicle in which seat belts are installed. CHILDREN ABLE TO SIT UP should be restrained with regular seat belts or an approved child restraint.

Where children are restrained with the regular seat belt and it is desired to raise their seating position this is to be done only by means of a support which is retained by the belt. NEVER USE A LOOSE CUSHION AS THIS COULD ALLOW SERIOUS INJURY IN THE CASE OF A VEHICLE COLLISION.

Child restraint anchorages

Your vehicle is fitted with anchorage points for child restraints. Anchorage points are located in the floor behind rear seats.

A child anchorage fitting is installed in your new vehicle in one of the anchorage positions.

WARNING: Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses.

Only approved child restraint harnesses should be used on anchorage points. See your Holden Dealer for advice about the various types of approved child restraints available.

INFANTS UNABLE TO SIT BY THEMSELVES should be carried in an approved child seat restraint.

Passenger's side air bag and child restraints

CAUTION:

NEVER install a rear-facing child restraint in the front seat of vehicles fitted with a passenger's side air bag. The child could be seriously injured if the passenger's side air bag inflates, as the back of a rear-facing child restraint would be very close to the inflating air bag.

You may install a forward-facing child restraint in the front seat, but ALWAYS move the passenger seat as far back as it will go.

It is always better to install a child restraint in the rear seat.

CHILD RESTRAINT ANCHORAGE

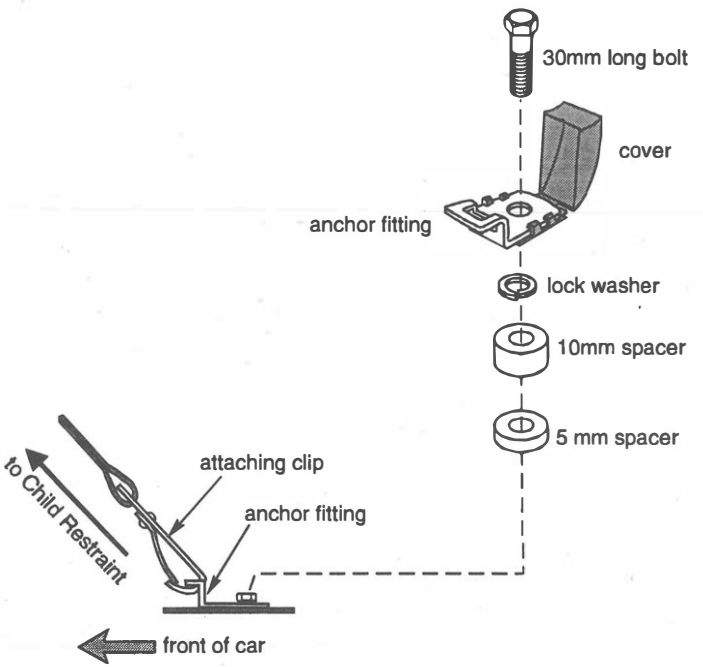
The illustration below shows how to install the anchor fittings for child restraints into the floor of this vehicle.

CAUTION: The anchor fitting is only applicable to child restraints approved to Australian Standard AS 1754-1991 (and subsequent amendments).

The anchor fitting is *not* applicable to older child restraints, *not* complying with Australian Standard AS 1754-1991, as the older child restraints may not attach securely to this type of anchor.

EXHAUST GAS WARNING - also refer Chapter 5

If the anchor bolt is removed from the floor the hole must be effectively sealed to prevent exhaust gases entering the vehicle interior. Either another suitable bolt or the plug originally fitted in the hole should be used.



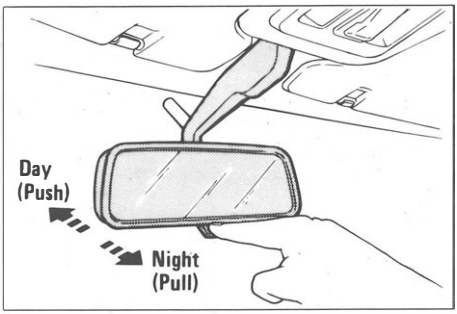
MIRRORS AND WINDOWS

Inside rear view mirror

Move the mirror right/left or up/down to gain the required angle.

The anti-glare lever on the lower edge of the mirror enables a reflector to be used during night driving. This reduces glare at night from following vehicles.

During normal daylight operation, the lever should be set forward. To reduce glare at night, move the lever towards you.

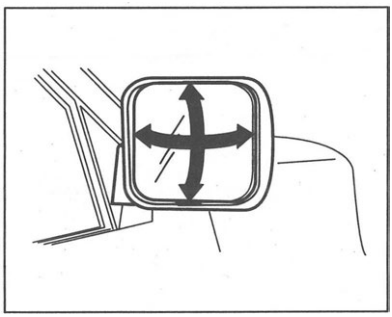


Manual outside rear-view mirror(s)

Adjust the outside rear-view mirror so you can just see the side of your vehicle in the side of the mirror. This helps you determine your relation to objects seen in the mirror. When selecting the most suitable angle ensure that the driver's head is in the normal position for driving, then adjust the mirror angle to suit.

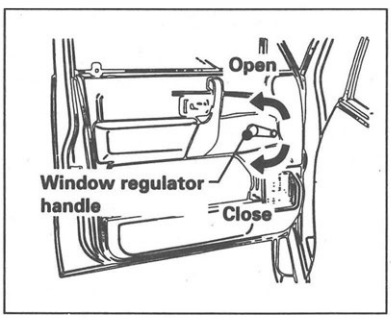
Refer Chapter 1 for electric mirrors.

The left mirror may be convex shaped, to provide a wider view. Objects will appear further away than they actually are.



Window handle (manual windows)

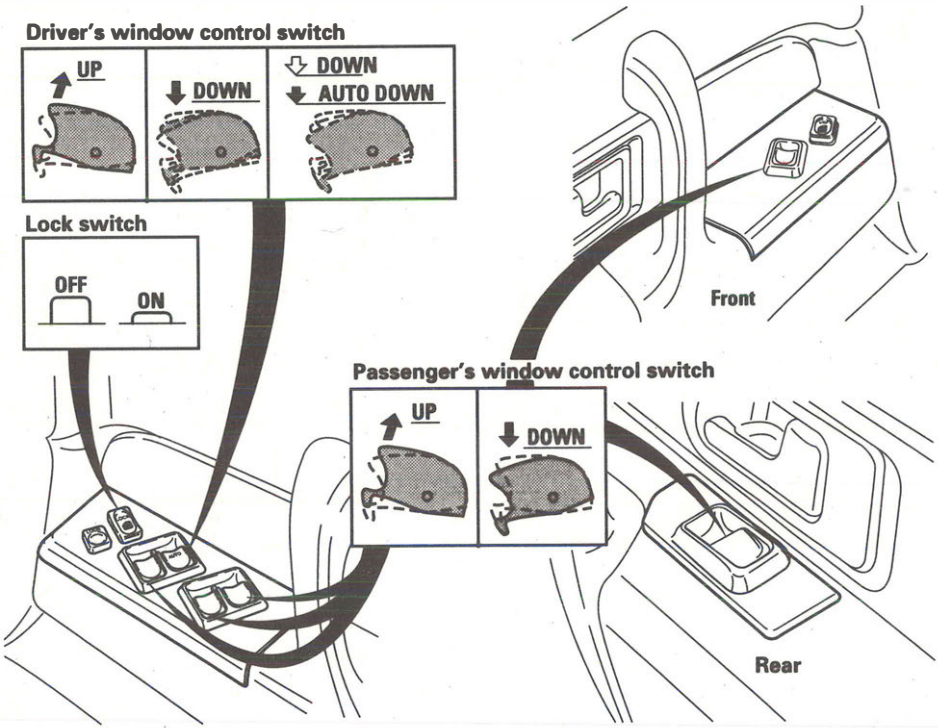
Turn the regulator handle to raise or lower the door windows. Refer next page for electric windows.



1/4 window (2 door model)

Pull catch forward and push window out until it locks. When closing, pull catch forward to release and then pull back into closed 'lock' position.

ELECTRIC WINDOWS (if fitted)



The electric windows are operational when the ignition is turned to *ON*. If the switches do not work, check the circuit breaker, refer Chapter 6.

Control switches

The main control switches are on the driver's door armrest, which contains a 'lock out' button plus one switch for each window.

Pull up the front section of each switch to close a window, or push down the front section of the switch to open the window.

In addition, the driver's window is fitted with 'auto down.' This means that if only slight pressure is used on the button the window will open until the button is released. If firm pressure is used, however, the window will completely open even after the finger is removed from the button.

The lock button, when de-pressed, will stop movement of all the passenger windows, either from the individual door switches or from the main control switches. Note that the lock button does not affect movement of the driver's window. Re-press the lock button to restore passenger window movement.

Passenger door switches

Apart from the complete set of switches on the driver's armrest, individual switches are located on each passenger door.

Pull up the front section of the switch to close a window, or push down the front section of the switch to open the window.

ELECTRIC MIRRORS (if fitted)

The switches for the electric mirrors are located between the front seats. Note that whereas mirror angle and mirror foldback are operational when the ignition is turned to ON or ACCESSORIES, mirror heating is only operational when the ignition is turned to ON.

Moving the mirrors forcibly by hand will damage them.

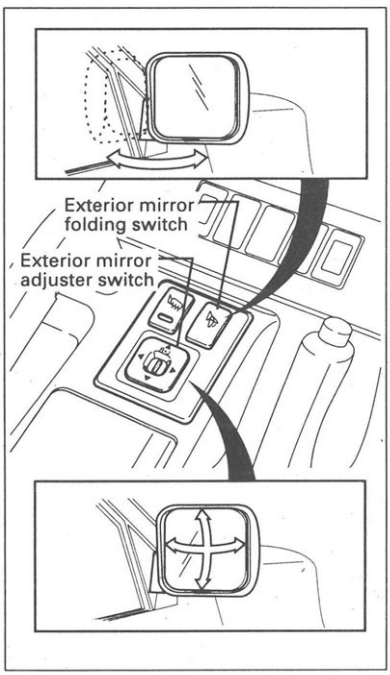
Mirror angle

The middle 'toggle' switch has two positions, left mirror or right mirror.

Push the edges of the square to move the mirror up, down, left or right.

It is not advisable to adjust the mirrors while driving.

The left mirror may be convex shaped, to provide a wider view. Objects will appear further away than they actually are.



Mirror foldback

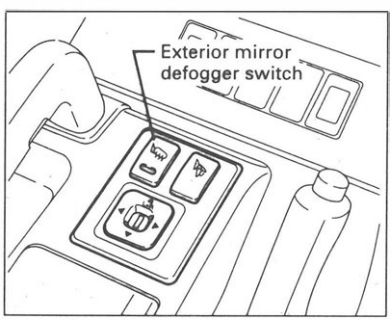
To avoid mirror damage when driving in rough terrain with limited clearance, the mirror assembly can be folded flat against the side of the vehicle. Press the switch once to fold the mirrors back, press again to return them to their original position, as soon as conditions permit.

Mirror heating

Useful for demisting the mirrors and for melting ice or snow, depress the switch to start heating the mirrors. The indicator light in the switch glows when the mirror heater is in use.

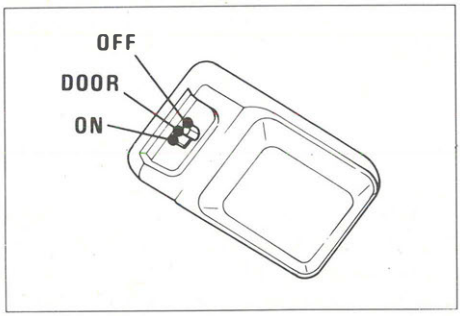
To avoid flattening the battery, turn the mirror heater off by re-pressing the switch when the mirrors are clear.

Refer Chapter 2 for operation of non-electric mirrors.



INTERIOR LIGHTS

To prevent flattening the battery, it is advisable not to leave lights switched ON For convenience, it is advisable to keep the switch in the DOOR position, where applicable.



Dome light (standard type)

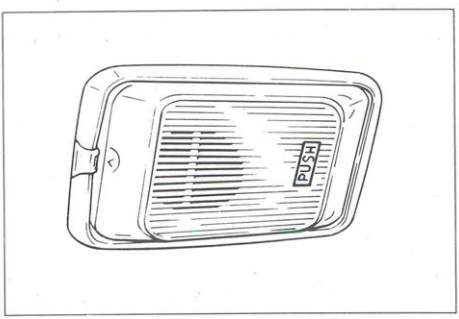
Located in the centre of the roof, the light switch has three positions.

ON Light turns on and remains on.

DOOR Light turns on when a door is opened and turns off when the door is closed.

OFF Light stays off.

Note: When the light switch is set in the DOOR position, always ensure all doors are fully closed. Otherwise, an unclosed door will leave the light turned on, and so may flatten the battery.



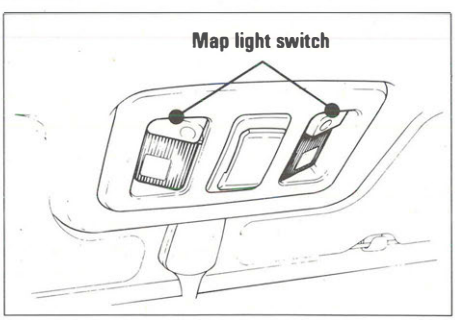
Dome light (if time delay fitted)

Located in the centre of the roof, the dome light comes on when a door is opened.

It begins to dim approx. 3 seconds after closing the door.

The light will also come on when the lens of the dome light is pushed, and will go out when the lens is pushed again.

Note: Always ensure all doors are fully closed, as an unclosed door will leave the light turned on, and so may flatten the battery.



Map lights (if fitted)

Fitted near the interior rear view mirror. 'Rock' the switch to the inside to turn the light on, to the outside to turn off.

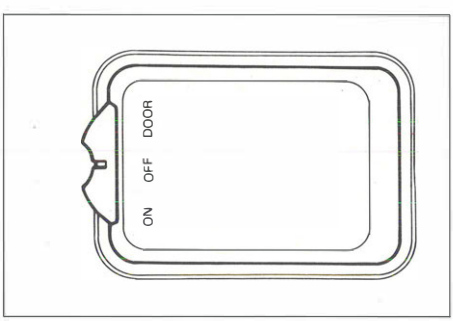
Tailgate light

Located high on the inside of the tailgate, the light switch has three positions:

ON Light turns on and remains on.

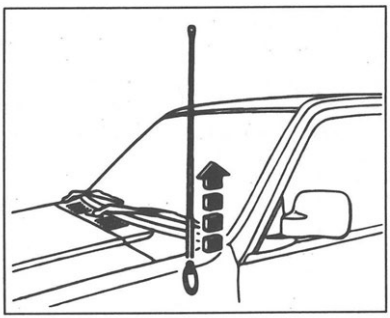
DOOR Light turns on when the tailgate is opened and turns off when the tailgate is closed.

OFF Light stays off.



ANTENNA, FOOT REST, ASSIST GRIPS, ASH TRAY

Antenna (electric)



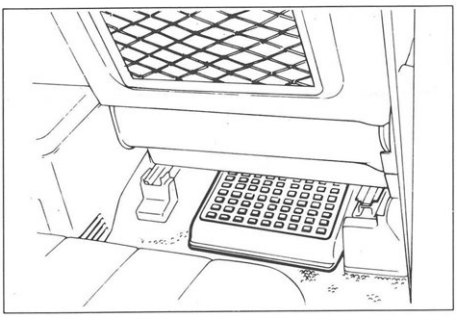
The antenna automatically extends to half normal height when the radio is turned on. For best radio reception in remote areas it may be necessary to extend the antenna fully using the antenna switch in the radio control panel.

The antenna automatically retracts when the radio is turned off.

It must be kept clean for good performance.

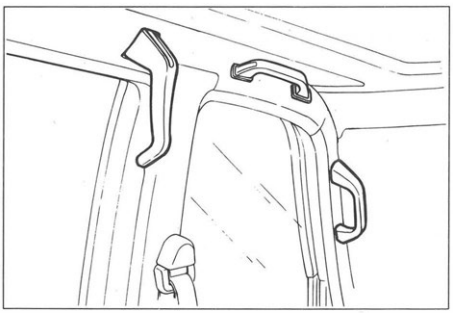
Refer to operating instruction supplement in the glovebox for all information about your radio and cassette.

Footrest (if fitted)



On some models foot rests are provided under the front seats, for rear passenger use.

Assist grips

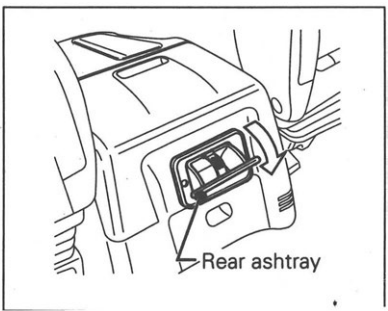


Assist grips are provided above passenger windows on all models and *in front* of windows on some models.

The assist grip above the rear window includes a coat hanger.

An additional assist grip is provided on the centre console for the front passenger's use.

Rear ash trays



The rear ash trays is located at the rear of the console, between the back of the front seats.

Tilt to use.

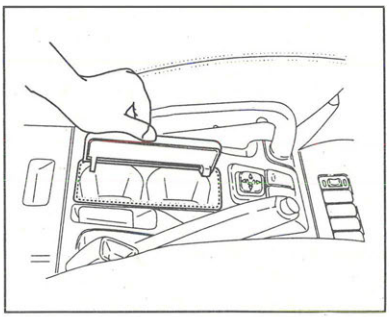
To empty, depress the top flap and pull the ash tray completely out.

Refer Chapter 1 for front ash tray.

CUPS, CONSOLE, STORAGE, VISORS, CARD HOLDER

Cup holder

Open the cup holder by lifting the lid. Close by lowering the lid. Be careful when using the cup holder as it will not prevent liquids from being spilled from the cup during abrupt stops or steering manoeuvres. Spilled liquids may soil or damage the interior of your vehicle.

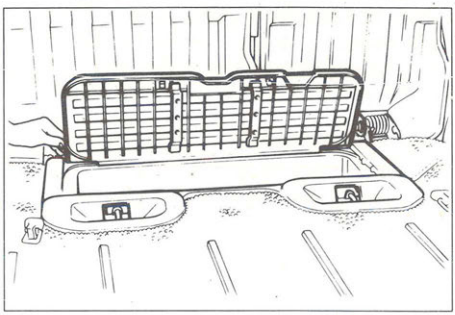


Console

The centre console is located between the two front seats. Lift the lid to open.

On some models the lid can be opened in two stages.

To close, push the lid down.



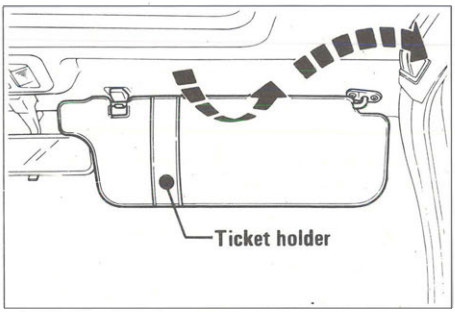
Storage bin (if fitted)

The luggage storage bin is in the floor, under the rear seat, and can be accessed when the rear seat is folded up.

Sunvisor

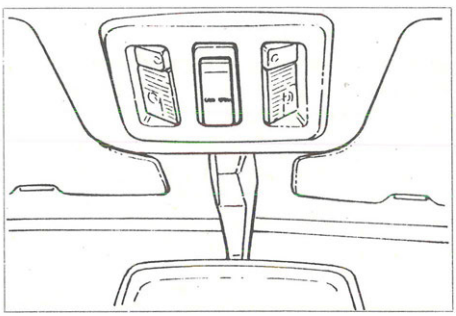
A ticket/document holder is fitted to the driver's side sun visor.

The sun visor can be pivoted to the side when unhooked.

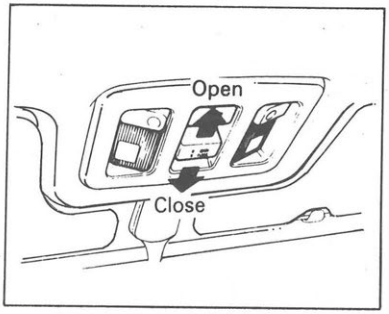


Card holder clip (if fitted)

For your convenience, a card holder clip is provided in the roof, between the front reading lights.



SUN ROOF (if fitted)



The sun roof is operative when the starter switch is in the ON position.

The two way switch is located near the rear view mirror, in the centre of the roof.

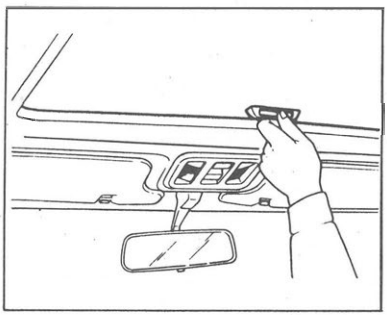
To open

Move the switch rearwards and hold. The sunroof will automatically stop at the two thirds open position (designed for reduced wind noise). To fully open the sunroof, release then re-press the switch.

To close

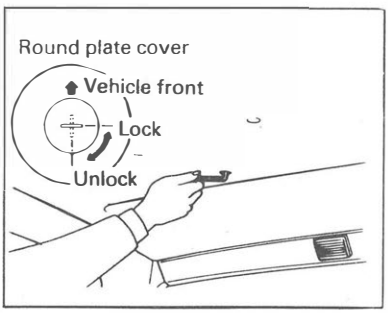
Move the switch forward and hold until the sun roof reaches the desired position.

For safety, the roof stops just before the fully closed position. To completely close it, release the switch and then move it forward again.



The sun shade (if fitted) can be slid open or closed by hand.

- When operating the sunroof take care with the heads and hands of passengers, especially when children are in the vehicle.
- Do not allow passengers to stick their head or body out of the sunroof when the vehicle is moving. An accident or sudden application of the brakes could result in severe personal injury. All occupants should be properly restrained with a seat belt.
- In snow areas the sunroof may freeze closed, in which case you will have to wait until the vehicle warms up before opening the sunroof.



If the system becomes defective and the sunroof cannot be opened or closed using the switch, it can be manually operated with the handle (supplied) as follows:

1. Remove a round cover from the centre of the roof lining in the load compartment. Unlock it by turning the centre a quarter turn with a screwdriver or coin.
2. Insert the handle and turn clockwise to open and anti-clockwise to close.

Never operate the switch for the sunroof when the handle is in position.

The functioning, appearance and life of the sun roof depends, to a large extent, on the correct operation (see above) and care.

If the roof becomes very dirty, use car shampoo and lukewarm water. Brush roof clean using a soft brush and working in one direction, from the front to the rear. Rinse roof with clean water. Always wash the whole roof. Allow wet roof to dry in the closed position.

PARK BRAKE

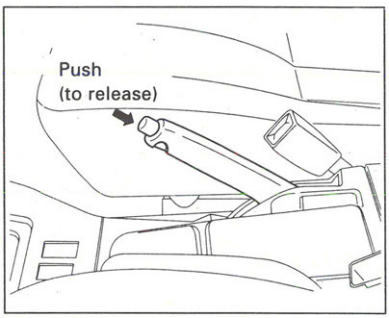
The park brake lever is between the front seats.

To apply, pull the lever up, without pressing the release button.

When the ignition switch it turned to ON, a symbol on the instrument panel will indicate that the park brake is not fully released.

To release, pull the lever slightly up, squeeze in the release button on the end of the lever and whilst depressed, lower the lever all the way down.

Never drive the vehicle with the park brake applied.



Notes

CHAPTER 4

Driving

Page

4-2 Safety
4-3 Petrol engine starting
4-4 Diesel engine starting
4-5 Manual transmission
4-6 Automatic transmission
4-9 Four wheel drive
4-10 Manual locking hubs
4-11 ABS (Anti-lock Brake System)
4-12 Running-in
4-12 Driving precautions

SAFETY

Before entering the vehicle

1. Check that windows, mirrors and lights are clean.
2. Visually check tyre inflation (check with a pressure gauge each week).
3. If you intend to reverse, check that the area behind your vehicle is clear.

Before driving off

1. Be sure that all doors are closed and secured.
2. Position your seat for comfortable driving.
3. Adjust rear vision mirrors.
4. FASTEN SEAT BELTS.
5. Check that all the warning indicators light up when you turn the key to start the engine.

Parking

1. Apply the park brake.
2. Switch off all exterior lights.
3. Place automatic transmissions in PARK. Place manual transmissions in REVERSE if pointing downhill or in 1st gear if pointing uphill.
4. Ensure that the 4WD lever is in 2H, 4H or 4L (not neutral).
5. Turn ignition key to LOCK and remove the key.
6. Shut all windows and lock all doors.

CAUTION:

Be careful where you park or drive. As with any vehicle, do not park or operate this vehicle in areas where combustible materials such as dry grass or leaves can come in contact with a hot exhaust system.

Never leave the engine running in a closed garage or underground car park.

PETROL ENGINE STARTING

1. Apply the park brake firmly and release only after you have started the engine and ready to drive off.
2. MANUAL: Depress the clutch pedal fully and move the gear lever to Neutral. The clutch pedal can now be released.

   AUTOMATIC (if fitted): Move the shift lever to P(park) or N(neutral) position. The engine will not start if it is in any other position. As a safety precaution, you must have your foot on the brake pedal in order to shift the transmission lever out of the Park position.
3. Start the engine as outlined below.

For cold or hot starting the procedure is the same. Do not touch the accelerator pedal. Simply turn the key to the START position and release when the engine starts.

If the engine does not start in 10 seconds, wait 15 seconds to let the starter cool down. Then crank the engine at wide open throttle (accelerator pedal pushed completely down to the floor) for a maximum of 10 seconds. If the engine still does not start, release the key and pedal. Wait another 15 seconds and then repeat the entire procedure.

If the engine still fails to start, contact your Holden Dealer.

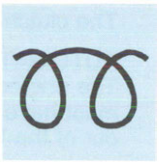
CAUTION: When trying to start the engine, do not hold the key in the START position for extended time, for if unburnt fuel were to reach the catalytic converter and ignite, the converter could overheat or be destroyed by backfire.

NOTE: You should not subject the engine to high load conditions such as full throttle acceleration or high speeds until is has completely warmed up.

DIESEL ENGINE STARTING

Glow plug indicator light

Your diesel engine has a special starting system. Small heating elements, called "glow plugs" warm part of the engine for improved starting.



Turning the starter key to the "ON" position starts the system and turns on the indicator light. This indicator light is located on the instrument panel.

When the glow plugs have heated the engine enough for it to start, the indicator light will go out - the engine is now ready to be started.

Note that waiting time depends on the engine temperature. The light may stay on for half a second if the engine is warm, or for about 5 seconds or longer if cold.

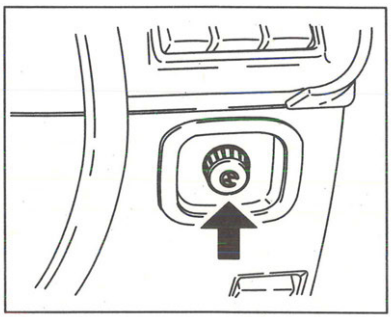
If the light fails to come on, see your Holden Dealer.

Starting

Turn the starter key to the "ON" position and check to see that the glow plug indicator light has turned on. As soon as the glow indicator light has gone off, fully depress the clutch pedal and move the transmission gear lever to Neutral. The clutch can then be released.

Crank the engine by turning the starter key to the "START" position. Release the key when the engine has started. It will return to the "ON" position.

If necessary to achieve a smooth idle, turn the idling control button clockwise. Remember to turn it fully anti-clockwise when the engine has warmed up (as indicated by the coolant temperature gauge).



NOTE: Do not keep cranking the engine for more than 30 seconds if the engine fails to start. Wait for 30 seconds before trying again.

Diesel turbo operating precaution

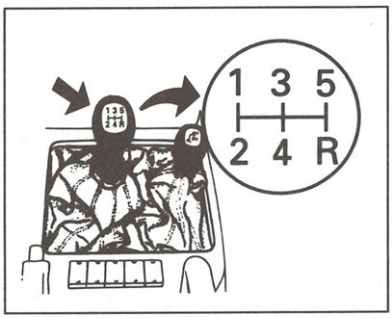
ENGINE STARTING Do not operate the engine above idle before normal engine oil pressure has been established (such as applying full throttle immediately upon initial start-up). This causes the turbocharger to operate at excessive speed before the bearings receive adequate lubrication.

Operation of the turbocharger for a period as short as 5 seconds without sufficient oil can cause bearing failure.

MANUAL TRANSMISSION

This transmission has 5 fully synchronised forward gears. The shift pattern is shown on the end of the gear shift lever.

Never attempt to engage Reverse gear until the vehicle has completely stopped. A slight pause between depressing the clutch pedal and moving into "Reverse" gear is desirable to allow all the rotating components to stop and avoid gear crashing.



Operating notes

- When shifting from one gear to another, be sure to depress the clutch pedal fully to avoid clashing and possible chipping the transmission gears.
- Shift the gear with a moderate effort to allow time for the transmission synchronizers to work properly.
- Whenever "Reverse" is selected with the ignition on, the back-up lights will operate.
- Do not drive with your foot resting on the clutch pedal as damage to the clutch may result.
- When stopped on an incline do not hold the vehicle by slipping the clutch. Use the park brake or brake pedal.
- When climbing steep grades, change down to a lower gear before the engine starts to labour. To maintain safe speeds on a steep downgrade and to reduce brake wear and overheating, shift into a lower gear before starting the decent.
- Do not over speed the engine when shifting down to the next lowest gear.
- 5th gear is recommended for maintaining highway cruising speeds and is not recommended for heavy city traffic.

AUTOMATIC TRANSMISSION

Depress the square release button on the right side to the T-bar handle when shifting to R or P and when shifting from 3 to 2 to L, as indicated by the white arrow.

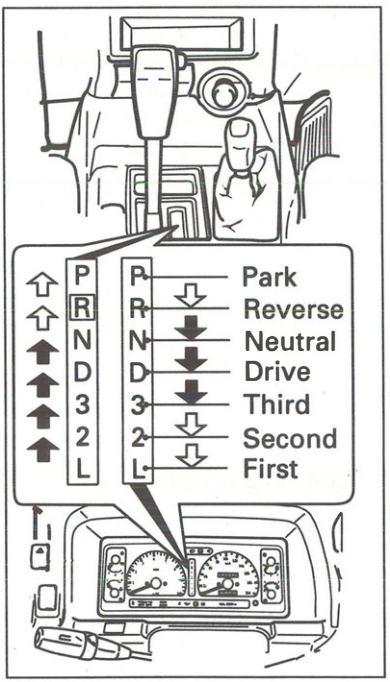
You may shift without depressing the release button into any positions indicated by the black arrow.

NOTE: The engine will not start unless the selector is in P(park) or N(neutral).

To prevent the vehicle `creeping' you should always have you foot on the brake pedal when shifting out of Park.

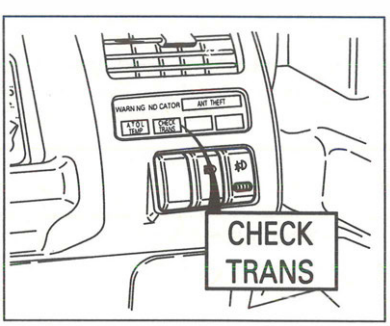
The T-bar position is also shown with an indicator light in the centre of the instrument panel.

Park, **N**eutral, **D**rive, **3**, **2**, and **L** are indicated with a green light. **R**everse is indicated with an orange light, designed to remind you to ensure that the vehicle is brought to a complete stop before moving the T-bar to a forward gear position.



Check trans

To see if the bulb is working, the CHECK TRANS light on the dash is displayed when the key is turned to ON (for location see Chapter 2).



AUTOMATIC TRANSMISSION cont.

If CHECK TRANS flashing

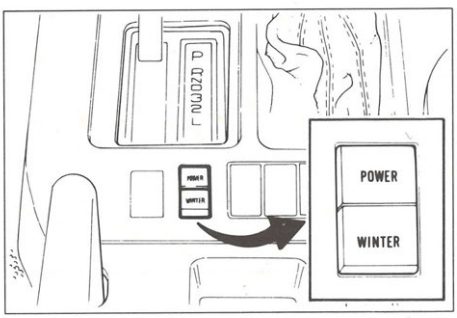
If the light flashes it means that the computer controlling the transmission has found a problem. The vehicle can still be driven when the light is flashing but should be checked by your Holden Dealer as soon as possible.

Depending on the nature of the problem, the transmission may still be able to change gears without your assistance. However, in some cases the transmission's computer may put the transmission into `safety mode'. In safety mode the transmission may not shift automatically and you must then shift the T-Bar lever to change gears at the following recommended speeds.

- High speed driving (over 80 km/h): select "3" or "D".
- Moderate speed driving (under 80 km/h but over 25 km/h): select "2".
- Starting from a stop, driving up or down a steep hill, or for engine braking when towing a trailer downhill: select "L".

Power/Winter/Normal drive

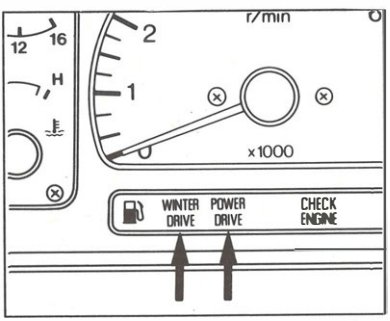
The two buttons marked POWER and WINTER control the three shift patterns available with your automatic transmission: POWER, WINTER and NORMAL. When the POWER button is pressed in, the power light is illuminated and the transmission is operating in the power drive mode, likewise for WINTER. When neither button is pressed in (and no light is illuminated) the NORMAL pattern is selected.



NORMAL drive is the most effective pattern for normal or freeway driving and allows for maximum fuel efficiency.

The POWER drive is recommended when overtaking and gives acceleration, especially in hilly areas or when towing.

WINTER drive is only recommended on slippery roads, as operation in WINTER drive during normal driving conditions will cause decreased performance and sluggish acceleration.



The winter mode may be activated when the T-Bar lever is in D and vehicle speed is less than 11 km/h and will be automatically deactivated when vehicle speed reaches approx. 34 km/h. It can also be deactivated by moving the T-bar lever to any position other than D, by pushing the WINTER button or turning off the ignition. WINTER drive is recommended when slowly starting off in slippery conditions; the vehicle will start off in 3rd gear.

AUTOMATIC TRANSMISSION cont.

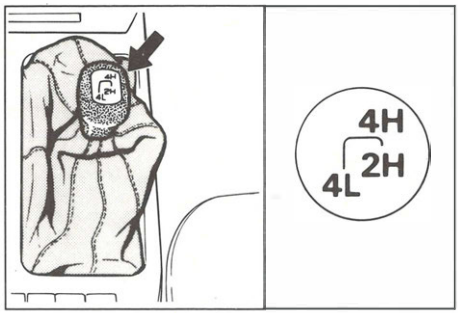
P (park)	This stops the rear wheels from turning and should be selected (together with the park brake) when leaving the vehicle. Never select P until your vehicle is fully stopped. The P position is one of only 2 positions (the other is N) in which your engine may be started.
R (reverse)	Never select R until your vehicle is fully stopped. Reversing light will operate when R is selected and the ignition is on. After reversing, make sure the vehicle has fully stopped before proceeding forward again.
N (neutral)	This is the out-of-gear position. You may then restart a stalled engine while the vehicle is still moving.
D (drive)	This is the normal forward driving position and allows the transmission to choose the appropriate gear (1st through to 4th) for the driving conditions and optimum fuel economy.
3 (third)	This position allows the transmission to shift to 1st, 2nd or 3rd gear as conditions require. 4th gear is excluded. Use this position when going down a long hill or on a road with many sharp curves. Shift back into the "D" position to return to normal driving.
2 (second)	This position allows the transmission to shift to 1st or 2nd gear. Use this position when going down a moderate gradient where you want to slow down a little without using the brake. Shift back into the "D" position to return to normal driving.
L (low)	The transmission cannot shift out of 1st gear when in this position and should only be used when strong braking effect is needed on a very steep hill. The T-bar lever can be shifted back to "L" at any speed. However, the transmission will not actually enter 1st gear until vehicle speed is below 60 km/h. Remember to shift back to "D" to resume normal driving.

- Do not go from P or N to R or D with the accelerator pedal depressed.
- When driving down a long hill, reduce your speed and select a lower range. The engine will provide a braking effect. Remember if you ride the brakes, they may overheat, resulting in reduced performance. This is particularly important when towing.
- Be careful when accelerating, upshifting, downshifting or braking on a slippery surface. The abrupt change in engine speed, such as sudden acceleration or engine braking, could cause the drive wheels to spin or skid.
- Don't rev the engine with the brakes on in either L, 2, 3, D, or R. This will overheat the transmission.
- Don't rev the engine to hold the car on a slope. Use the brakes.
- Don't ever coast the vehicle in N - this lessens your control and the engine braking power.
- Always slow down in gusty crosswinds.
- Refer Chapter 6 for checking automatic transmission fluid level.

4 WHEEL DRIVE

Transfer lever

When the transfer lever is in 4H or 4L the indicator light on the instrument panel will glow.



2H: Two wheel drive, high range. Use this for normal driving on sealed roads. This position gives greater economy, quieter ride and least vehicle stress.

4H: Four wheel drive, high range. Use this for icy or snow covered roads and loose surface such as gravel. This position provides greater traction than 2WD. Top speed is limited to 80 km/h.

4L: Four wheel drive, low range. Use this for maximum power and traction. Use 4L for climbing or descending steep hills, off-road driving and hard pulling in sand, mud or deep snow.

Do not use 4WD for normal driving on sealed roads. It will cause unnecessary noise, poor fuel consumption and stress 4WD components.

When shifting the transfer lever be sure to shift quickly and securely. Do not stop shift lever movement midway. Some noise is normal during shifting of the transfer control lever.

When the transfer lever is not securely in gear (2H, 4H or 4L) driving force cannot be transmitted to the wheels. Driving with the transfer lever not securely in gear may cause damage to the transfer gear box.

If your vehicle is fitted with an automatic transmission, be careful not to exceed the maximum speed shown in each range when accelerating.

Transfer control lever	L	2	3
2H	56 km/h	93 km/h	-
4H	56 km/h	80 km/h	80 km/h
4L	24 km/h	40 km/h	40 km/h

MANUAL LOCKING HUBS (if fitted)

4 wheel drive / 2 wheel drive selection is made by both transfer lever position (from inside the vehicle) and front (left and right) wheel hub position. That means that the vehicle will not operate in the 4 wheel range until the wheel hubs have been locked - even if the transfer lever is in the 4L or 4H position.

To move from 2H to 4H

1. Move the lever to 4H. If front hubs are already locked, 4WD can be selected while driving. If front hubs are unlocked then you must never shift the transfer lever while the vehicle is in motion, or you may damage the vehicle.
2. Set both left and right front wheel hubs to the "LOCK" position.

To move between 4H and 4L

AUTOMATIC TRANSMISSION: If your vehicle has an automatic transmission, stop the vehicle and move the transmission T-Bar lever to "N", before moving the 4WD transfer lever to 4L.

MANUAL TRANSMISSION: If your vehicle is fitted with a manual transmission then you must STOP the vehicle, fully depress the clutch pedal and move the lever from 4H to 4L or 4L to 4H.

To select 2WD

1. Shift the transfer lever to 2H.
2. Set both left and right front wheel hubs to the "FREE" position.

2H can be selected at any speed by the transfer lever. The indicator light on the dash will go out because the vehicle will be driving in 2WD but until the hubs have been unlocked poor fuel economy will result.

MANUAL LOCKING HUB CAUTIONS:

- Never drive the vehicle with the front wheel hubs in the "FREE" position and the transfer lever in 4H or 4L above 5 km/h or 100 metres.
- Never LOCK one hub only - both sides must be either in the "LOCK" or "FREE" position.
- Vehicles should never be operated on hard surfaces or sealed roads for a distance above 1 kilometre in 4L or 4H with the hubs in the "LOCK" position.
- Vehicles should never be manouvered through tight turns on hard surfaces when in 4L or 4H with the hubs in the "LOCK" position. This will avoid damage to the drivetrain and/or driveline windup.
- To properly run-in front wheel drive axle components, drive the vehicle for the initial 300 km with the wheel hubs in the "LOCK" position.
- To lubricate the front wheel drive axle, the vehicle should be driven for at least 20 km every month in 2WD with the wheel hubs in the "LOCK" position.
- Never move the transfer control lever from High to Low range (4H to 4L) or from Low range to High range (4L to 4H) while the vehicle is moving.

ABS - ANTI LOCK BRAKE SYSTEM

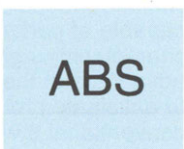
The ABS (Anti-lock Brake System) is in addition to your vehicle's normal brake system. It prevents the wheels from locking up when braking, irrespective of the road conditions and tyre grip. It starts to regulate the braking as soon as a wheel shows a tendency to lock. The car remains steerable, even in the event of panic braking, for instance on bends or when swerving to avoid an obstacle.

Maximum braking is provided for each wheel, up to the point where it would lock. This means that steering control is retained.

In an emergency braking situation the driver should keep full force on the brake pedal, without 'pumping' the brake pedal. 'Pumping' the brake pedal can reduce brake efficiency when ABS is controlling the braking.

DO NOT let this special safety feature tempt you into taking risks when driving. Traffic safety can only be achieved by safe driving. Your speed should always be adjusted to suit road and traffic conditions.

An ABS warning light is provided with the gauges. To check that the bulb is working, the light will come on when the ignition is first turned on and goes out after the engine has started. If this symbol is displayed when driving a malfunction of the ABS system is indicated. Remember, however, that this only means that the system's 'no lock' assistance is not operating, your vehicle's conventional brake system will still operate normally.



When your vehicle is in a critical braking condition the ABS system will make itself noticeable through pulsing of the brake pedal and the noise of the regulation process, thereby reminding you to match your speed to the road conditions, even though it is keeping control of the braking.

When the ignition is turned on (and car speed is greater than 6 km/h) the ABS system performs a self check. This may be heard as well as felt, as pulsing, through the brake pedal.

If the brake is put on while turning or driving over split-level road surfaces, ABS will often be actuated . This is normal because the inside wheels or the wheels running over split-level have less driving force and are easier to lock.

DRIVING PRECAUTIONS

Running-in

These days, there's no need to follow the formal running-in schedule. However, by observing a few simple precautions during the first few hundred kilometres of driving you will greatly assist your vehicle's future performance and economy.

For the first 800 kilometres, don't exceed 90 km/h and avoid driving at any one speed - either slow or fast - for any length of time. Therefore, avoid using the cruise control (if fitted) while "running-in".

Always drive at moderate speed until the engine has completely warmed up.

For the first 800 kilometres heavy braking should be avoided, except in an emergency, since brake misuse during this period could impair future braking efficiency.

It is best to drive your new vehicle for 1,500 kilometres before towing a load. If you must tow before this do not exceed 80 km/h on good roads. No heavy off road towing should be attempted before 1,500 km.

Vehicle design

Jackaroo models have higher ground clearance and a narrower track to make them capable of performing in a wide variety of off-road applications. Specific design characteristics give them a higher centre of gravity than ordinary vehicles. An advantage of the higher ground clearance is a better view of the road allowing you to anticipate problems. They are not designed for cornering at the same speeds as conventional 2 wheel drive vehicles any more than low-slung sports cars are designed to perform satisfactorily under off-road conditions. If at all possible, avoid sharp turns or abrupt manoeuvres. As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control or vehicle roll over. Always use your seat belt.

Brakes

- Power assisted brakes, which are fitted to your vehicle, utilise vacuum from the engine when it is running. Never let the vehicle run down steep grades without the engine running. Never coast with the engine switched off.
- If the power assist is lost because of a stalled engine they are designed to have enough reserve vacuum for you to bring the vehicle to a full stop by applying the brake pedal once - do not pump the brake pedal to stop the vehicle.
- A decrease in driving, cornering and braking traction occurs when water, snow, ice, gravel or other materials are on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions.
- Driving through water may affect performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.
- Brake pedal travel should not be obstructed by ill-fitting floor mats or any other material under the pedal which causes interference with normal pedal movement.
- Your seat should be positioned so that you can reach the brake pedal satisfactorily under all braking conditions.

DRIVING PRECAUTIONS cont.

Steering

- Power assisted steering, which is fitted to your vehicle, has been designed to reduce steering effort. It uses hydraulic pressure to lighten steering loads and is designed so that "road feel" is retained. Care should be taken not to hold a turning force on the steering wheel when stationary (i.e. when waiting before turning a corner, etc.) as this creates unnecessary high operating pressures within the system.

- If the power steering is rendered ineffective because the engine has stalled, the drive belt broken or if the pump reservoir is empty of fluid, the car can still be steered. However, due to the much greater effort required to steer, it is recommended that you have the problem fixed promptly.

Loose articles

Whenever possible, loose articles should be firmly secured, as they can become flying projectiles in accidents. Storage areas include the glovebox, the console, seat back storage pockets, tie down straps in the luggage area, and (on some models) storage bins under the rear seat.

Modifications to your vehicle

Any modification (including fitting non approved accessories) to your vehicle could affect its performance, safety, or durability and possibly invalidate the warranty. In particular:

- Incorrectly mounted bull bars may affect vehicle handling and cause damage to the frame of the vehicle.
- Insulation-piercing quick fit type wiring connectors may damage wiring and electronic components.
- Under no circumstances should the engine or transmission computer systems be altered or added to.

Not only will the fitting of unapproved items be likely to damage your vehicle, but many are illegal, for instance tow bars and bull bars are covered by legal requirements. You should contact your Holden Dealer for assistance, if required.

Warning

The fitting of a non-Holden bug deflector on the front edge of the bonnet is not recommended. A non-Holden bug deflector may cause the engine to overheat by deflecting air from the engine air intake, located to the rear of the bonnet.

DRIVING PRECAUTIONS cont.

Parking - automatic transmission

If the vehicle is parked on a hill, always apply the park brake before placing the transmission in Park. Otherwise the weight of the vehicle may put so much force on the transmission that it may be difficult to pull the lever out of Park.

Therefore, when parking, always apply the park brake before moving the lever to Park. When preparing to move off, put your foot on the brake pedal, shift the lever out of Park and then release the park brake.

Water crossing

Whenever driving across a shallow river or deep puddle, extreme care must be exercised or water may enter the engine air intake causing serious engine damage.

To prevent water being forced through the grille into the engine compartment, tie a sheet of canvas or some other suitable material to the underside of the front bumper bar and wrap it over the bumper, grille and top of the bonnet with a tie back to the door mirrors.

Remember that steady speed and constant traction are necessary for successful water crossing.

When the crossing is completed, remove the canvas.

After deep water crossing, check to ensure that no water has entered and mixed with the oil of the following components: engine, transmission, transfer, front and rear differential, refer Chapter 7.

Disc brake wear indicators

Front and rear disc brakes have built-in wear indicators which should make a high-pitched squealing or cricket-like warning when the brake pads are so worn that new pads are needed. The sound will come and go, or be heard all the time when the vehicle is moving and may stop when the brake pedal is pressed down firmly. Expensive disc damage can result if pads are not replaced when needed.

Notes

CHAPTER 5

Fuel

Page

5-2 Carbon monoxide caution
5-3 Petrol filling
5-3 Diesel filling
5-3 Fuel Tank capacities
5-4 Emission Control
5-5 Reducing fuel consumption

PETROL

EXHAUST WARNING - CARBON MONOXIDE POISONING

Exhaust gases can produce carbon monoxide, a dangerous gas, which can cause unconsciousness and even death to both humans and animals.

You could inhale the gases if the exhaust system on your vehicle is faulty.

To protect against exhaust gases entering the vehicle, the exhaust system and body should be inspected:

- each time the vehicle is serviced
- whenever a change is noticed in the sound of the exhaust system
- whenever the exhaust system, underbody or rear of the vehicle is damaged.

Take the vehicle to your Holden Dealer if you think your vehicle needs inspecting for any of the above reasons.

DO NOT SIT (OR LEAVE THE CHILDREN OR PETS) IN A PARKED VEHICLE FOR ANY EXTENDED PERIOD OF TIME WITH THE ENGINE RUNNING. DO NOT RUN THE ENGINE IN AN ENCLOSED AREA (SUCH AS THE GARAGE) ANY LONGER THAN IS NEEDED TO MOVE THE VEHICLE.

Driving with the tailgate open is not recommended. If you *must* travel with the tailgate open, close all windows, ensure that the heater controls are set to outside (rather than re-circulate) with air directed to the face and the fan on the highest speed. Do not exceed 50 km/h unless necessary.

PETROL CAUTION:

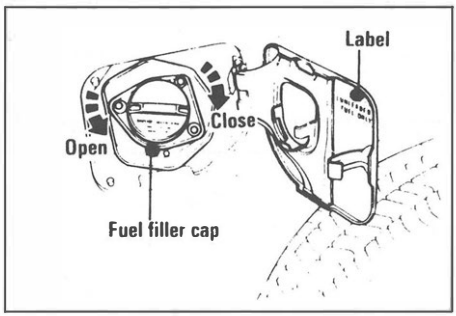
- Petrol is extremely flammable and highly explosive.
- Always turn off the engine when refuelling.
- Do not smoke or allow open flames or sparks near the vehicle when refuelling.
- If petrol fumes are smelt while driving, the cause should be found and corrected without delay.

PETROL and DIESEL

A release lever for the fuel filler flap is provided on the console, between the front seats. Pull the lever up to release the flap.

The petrol cap, located under the fuel flap is a screw-on ratchet type. After refilling, tighten the cap clockwise until a clicking noise is heard, before closing the flap.

Fuel tank capacity is approx. 85 litres.



Petrol engines

Use UNLEADED PETROL of 91 octane rating, or higher.

High octane unleaded petrol ("Premium" etc.) may be used, but is not required by your vehicle.

The use of any other fuel will seriously damage the engine of your vehicle and may void your Warranty. Only clean petrol of good quality should be used.

Petrol tanks should always be filled at the intermediate or fast fill rate. Don't add any more petrol after the petrol filler first clicks off or petrol blows back - as this allows room for the petrol to expand inside the tank.

It is only permissible to "trickle fill" petrol tanks when the vehicle is to be driven for more than 50 km immediately after the tank is filled. However, this is not recommended on days over 30°C.

Wipe off any overflowing petrol from the vehicle immediately; spray or splash with water.

Diesel engines

Use a good quality diesel fuel of at least 49 cetane rating. Note, if the diesel fuel tank is run completely dry the fuel system must be "bled", refer Chapter 6.

PETROL - EMISSION CONTROL

During the combustion process in an automotive engine, some of the fuel (hydrocarbons) fail to burn and are discharged into the engine crankcase or exhaust system. Additionally, hydrocarbons are emitted into the atmosphere through evaporation of petrol vapours from the fuel tank. Of the total hydrocarbons coming from uncontrolled automobiles, about 25% are emitted from the crankcase, 20% from the fuel system and 55% from the engine exhaust. In addition to hydrocarbons, carbon monoxide and oxides of nitrogen are also formed during the combustion process. These are also discharged into the exhaust system. There are three areas from which pollutants are emitted:

(a) Exhaust System
(b) Crankcase
(c) Fuel System

A number of controls have been installed by I-GM to control the amount of pollutants emitted from your new vehicle. It is recommended that any replacement parts used for required maintenance services or for the repair of emission control systems be new parts. Use of replacement parts which are not of equivalent quality may impair the effectiveness of such systems, and may avoid your Vehicle Warranty.

Owner responsibility

Vehicles sold and serviced within Australia have been designed to comply with Australian Design Rules and State Regulation emission requirements.

The engine or exhaust system of the vehicle must NOT be modified in any way. Any change to the design may increase the emissions or otherwise defeat the intent of the regulations.

Any person who removes, modifies or hinders any part of the emission control system will be contravening regulations. It is also illegal to drive a vehicle modified in this way.

Maintenance requirements

To ensure continuing compliance with the regulations you must maintain your vehicle's emission control system as per your vehicle's service manual, at the frequency shown in the Maintenance Schedule in chapter 12.

It is recommended that the necessary servicing be performed by an authorised Holden Dealer who has the specialised servicing equipment and trained personnel available to ensure that the adjustments and services specified are carried out.

REDUCING FUEL CONSUMPTION

Engine

Maintain the engine in peak mechanical condition by having it serviced regularly in accordance the Maintenance Schedule on Chapter 12. This will ensure items such as the spark plugs and air cleaner are maintained for minimum fuel usage and peak engine performance.

Tyre pressure

Keep the tyres at the recommended pressures. Under-inflated tyres create extra rolling resistance and wastes fuel, refer Chapter 7.

Incorrect tyre pressures can also cause uneven and premature tyre wear.

Wheel alignment

Maintain correct front wheel alignment. Incorrect alignment makes the front wheels drag, wastes fuel and causes uneven and premature tyre wear.

Warm ups and idling

Avoid long engine warm ups. They are unnecessary and waste fuel. An engine takes approximately five minutes to reach its efficient operating temperature and it does this most effectively when driving.

You should also avoid long engine idling. If your have to wait for more than a couple of minutes turn off the engine to conserve fuel.

Accelerating, driving and braking

Accelerate gently - avoid rapid starts, sudden bursts of speed and full throttle acceleration - they're certain fuel wasters.

Drive the vehicle at steady speeds where possible (after run-in). It is desirable to reach top gear as soon as possible, but under no circumstances should you force the engine to labour in top gear.

Riding the brake

Do not rest your foot on the brake pedal when you do not intend to brake, as this can overheat the brakes, increase brake pad wear, damage the brakes and waste fuel.

Air conditioning (if fitted)

Turn off the air conditioning, when not required. However, once every two weeks, with the engine running, switch the air conditioner on for 5 to 10 minutes, even in Winter, to lubricate seals.

Excess weight

Fuel economy is related to the work the engine must do. The heavier the load, the more fuel it takes to run. Keep weight to a minimum by removing unnecessary cargo.

4WD / 2WD

In normal driving, shift the transfer lever to 2H and ensure the hubs are unlocked.

CHAPTER 6

Emergencies

Page

6-2 Accident
6-3 Medical assistance
6-4 Air Bags
6-6 Flat tyre
6-8 Engine overheating
6-10 Flat battery
6-12 Towing a disabled vehicle
6-13 Freeing a vehicle from sand
6-13 Power window circuit breaker
6-14 Fuses
6-15 Draining diesel water separator
6-16 Bleeding diesel fuel system

Your new vehicle is covered for 3 years by 24 hour Roadside Service, refer Chapter 9.

ACCIDENTS

All drivers are advised to learn what to do at the scene of an accident, particularly where people are injured. Injured people can choke to death if their air passages are not cleared, they can bleed to death unless the bleeding is stopped, they may require mouth-to mouth resuscitation or may have to be moved, even though badly injured. It is important that you understand how to avoid further damaging an injured neck or back or other broken limbs .In all cases, ensure safety for the rescuers, victims and bystanders. The following notes may help.

Accident - being involved

Stop immediately and remember to turn off the engine and apply the park brake.

Remember that time is vital. Remain calm and alert. Think quickly and clearly.

Give all possible assistance to all injured persons (see following page).

Send for police and ambulance if anyone has been injured. Give information as accurately as possible: the exact location, the number of injured people and a brief report on the overall situation.

Perhaps take charge of the situation.

Warn all other traffic approaching the scene. Turn off ignition switches. Stop any smoking near spilt petrol. In darkness, try and light up the area to warn others.

Clear the road of accident debris.

Exchange your name, address, vehicle registration, owner's name and address with the other parties involved in the accident.

If damage to property only has occurred, report the facts to the owner of the damaged property or to his/her representative, to any police present at the scene or to the nearest Police Station.

Try to note all important facts because such details may be important if needed later.

Accident - being a witness

If you witness a road accident or it becomes your task to stop and help:

- Keep in mind that an observant witness can prove most helpful. Some day you yourself might be very glad of help from a witness.
- DO NOT stop at the scene of an accident just to be a spectator. If other people are already in attendance and giving assistance, you should stop only if you can contribute assistance.
- Give what assistance you can to any injured persons (see following page).
- Follow most of the steps suggested above. Perhaps you may have to take charge of the accident situation.

ACCIDENTS

Medical assistance

Keep calm and think clearly. Your experience may not be much but do your best.

- Look after the unconscious person first. Check airway, breathing and circulation. If no breathing, then check if air passages are clear, i.e. nose and mouth. Use your fingers to clear air passages if necessary. If the air way is clear then mouth-to-mouth resuscitation may be needed at once.

Unconscious people can choke.
Carefully turn to one side.
Tilt the head back slightly.
Wipe out the mouth with your finger to remove blood, vomit, broken teeth or dentures.

- You must be very careful when moving an injured person. It is best not to move at all, except if in danger, as serious and permanent damage can be done to an injured neck or back if not supported during movement. NEVER BEND OR TWIST A NECK OR BACK. KEEP THEM STRAIGHT. All injured limbs require support when an injured person has to be moved.

- Provided it is not dangerous to do so because of other injures, an unconscious person will do best in the position illustrated here.

Lay the person on one side and - if it will not aggravate any injuries
Bend the uppermost knee until the thigh is at right angles to the body.
Bend the uppermost arm and elbow so that the hand lies near the face.
Gently pull the underneath arm so that it rests straight on the ground, free of any body weight.

- Try to stop bleeding by applying direct pressure, using your hand, or by pressing torn flesh together. Use any clean cloth available. Fold cloths to make pads. If necessary press one pad on top of another. Keep pressure around edges of a wound BUT NEVER USE A TOURNIQUET.

- Shock may be treated by reassurance, relieving pain, controlling any bleeding and keeping the injured person warm but not hot. Best not to give any fluids and NEVER ALCOHOL.

- If the injured person is in danger and has to be moved, try and have three or four people help, concentrating on not bending or twisting the neck, spine and injured limbs. Keeping the neck and spine straight is most important.

Illustrations reproduced from "The Victorian Road Code" with permission from Road Safety and Traffic Authority of Victoria.

AIR BAGS (if fitted)

If your vehicle is fitted with an air bag system the word SRS (supplemental Restraint System) will be shown on the steering wheel. This means that 2 air bags are fitted, one for the driver and another for the front passenger, which will operate as a pair - they are triggered simultaneously.

If your vehicle is involved in a severe front end collision, the air bags will inflate, assisting the seat belts to restrain forward body movement.

An operating noise may be heard and a small amount of smoke-like gas will be released. The gas is harmless and does not indicate malfunction or fire.

The air bags will then deflate - the whole process *only taking a moment.*

The air bags assist but does not replace the seat belts. Air bags are not designed to inflate if the vehicle is hit from the rear or side or the vehicle overturns.

An impact caused by dropping into a large pothole or depression in the road may or may not inflate the air bags.

Seat belts (by law) should be worn by all passengers whenever the vehicle is moving.

Air bags inflate with great force. If you are too close to an inflating air bag it could seriously injure you. Seat belts help keep you in position for air bag inflation in a crash.

The AIR BAG light on the instrument panel will blink 7 times when the ignition is switched ON, then go out. This is to indicate that the air bags are operational. If the light *does not* blink when the ignition is switched to ON, or if it comes on when driving this may indicate that there is a fault in the air bag system and you should contact your Holden Dealer.

If the air bag system is handled incorrectly it can be set off for up to 15 seconds after the ignition has been turned off and the battery disconnected and cause injury. Be sure to follow proper service procedures, and make sure that the person performing the work for you is qualified to do so.

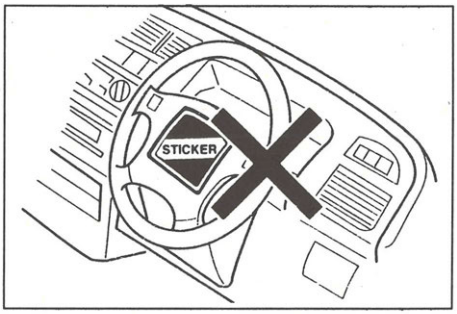
After use the whole air bag system will have to be replaced by your Holden Dealer.

The system should also be inspected by a Holden Dealer if the steering wheel or dash board area is scratched, cracked or damaged.

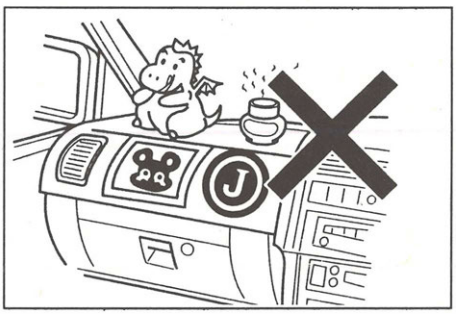
AIR BAGS (if fitted)

CAUTION:

The horn pad must not be covered with adhesive or any other material, as this may hinder air bag operation.



The dash board area must also be kept clear with nothing around this area, hanging from the sun visor or stuck to the dash.



Extensive design and testing has gone into the air bag system. It is extremely reliable and has very little chance of accidental inflation. It should however, be treated with respect. Any careless or unskilled interference with the system could lead to its failure or to accidental inflation. Any work to the electrical system, steering column, dash board area, steering wheel or air bag system should *only* be carried out by an authorised Holden Dealer.

BULL BAR NOTE: Fitting a "bull bar", or making other modifications to the front of the vehicle, may change the impact speed which would normally cause the air bag to inflate, reducing its effectiveness.

Passenger's side air bag and child restraints

CAUTION:

NEVER install a rear-facing child restraint in the front seat of vehicle with a passenger's side air bag. The child could be seriously injured if the passenger's side air bag inflates, as the back of a rear-facing child restraint would be very close to the inflating air bag.

You may install a forward-facing child restraint in the front seat, but ALWAYS move the passenger seat as far back as it will go.

It is always better to install a child restraint in the rear seat.

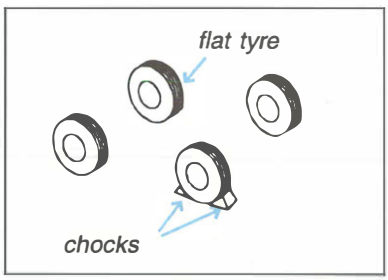
FLAT TYRE

Driving for even a short distance on a deflated tyre can damage a tyre and wheel beyond repair.

CAUTION:

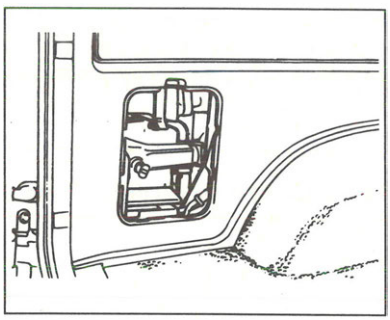
- Never use a jack designed for another vehicle to lift your vehicle, or use your jack to lift another vehicle.
- Never get beneath the vehicle when it is only supported by the jack.
- Do not start or run the engine while the vehicle is only supported by the jack.
- All passengers should be out of the vehicle when it is being jacked.
- Use the jack only at the designated lifting points. Use in other locations can cause vehicle damage.
- The vehicle should only be jacked on hard, level surfaces.
- This jack is a two-stage type. When both rams are raised and both stop marks becomes visible, stop jacking immediately. Further extension of the ram may damage the jack.

1. Park on level surface and set parking brake firmly.
2. Set automatic transmissions in park or manual transmissions in reverse. Ensure that the transfer lever is firmly in gear (2H, 4H or 4L). Remove the ignition key. Turn on the hazard warning flasher if appropriate.
3. Block the wheel diagonally opposite the flat tyre.



4. Remove the jack handle, jack and wheel wrench, which are installed in a compartment on the passengers side of the rear load area.

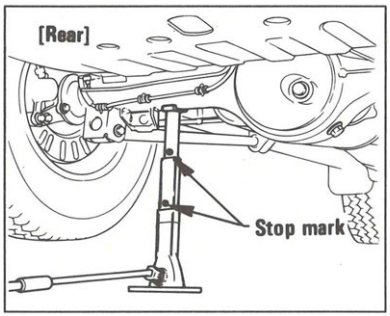
   Remove the spare wheel, mounted on the back door.

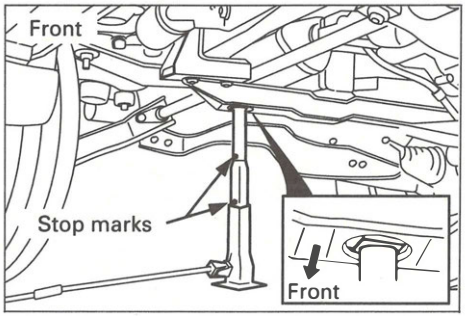


5. Remove the wheel trim.
6. Loosen, but do not remove, wheel nuts by turning the wrench anti-clockwise.
7. Insert one end of the jack rod into the jack and the other end of the jack rod through the wheel wrench. The wheel wrench then becomes an extended handle for the jack.

FLAT TYRE

8. Position the jack under the vehicle, according to the illustration. The rear jack position is under the rear axle, near the wheel. The front jack position is at the bottom surface of the cross member.





9. Remove the wheel nuts and remove the wheel.

10. Replace the wheel nuts with the cone shaped end towards the wheel. Tighten the wheel nuts with your fingers in a criss--cross pattern. Then, tighten the wheel nuts with the wheel wrench, again in a criss cross pattern. Ensure that the wheel is seating squarely against the hub and is not tilted.

11. Lower the vehicle until the wheel touches the ground and is held from rotating. Fully tighten the wheel nuts in a criss cross pattern.

12. Replace the wheel trim.

13. Completely lower the vehicle and remove the jack using the handle in the bracket provided. The jack should be completely lowered before stowing.

14. Stow the tools and changed wheel, as shown on previous page. Note that the spare wheel fits on the tailgate with the dished side of the wheel turned to the tailgate.

CAUTION:

As soon as possible after changing a wheel, you should have the wheel nuts tightened with a torque wrench to 118Nm (87 ft-lbs).

Wheel nuts should be tightened evenly to the correct torque in a criss-cross pattern. Improperly tightened wheel nuts could eventually allow the wheel to come off while the vehicle is moving!

Never use oil or grease on wheel studs or nuts. Sparingly apply "Loctite" anti-seize compound (or similar) to wheel stud threads to prevent nuts from seizing on the thread. Anti-seize compound should not get on the tapered end of the wheel nut. To ensure this does not happen, do not apply anti-seize compound to wheel nuts, but only to the wheel studs.

ENGINE OVERHEATING

CAUTION: If the engine should overheat, as indicated by the temperature gauge reading or if you suspect there is a serious overheat condition immediate action is required. Continued operation of the engine EVEN FOR A SHORT TIME could result in a fire and the possibility of personal injury and/or severe vehicle damage.

If the coolant temperature gauge needle should move all the way to the "H" position and remain there for more than 30 seconds, pull out of the traffic as soon as it is safe to do so and stop the vehicle. Leave the engine idling for a few minutes whilst you step out of the vehicle to check that the cooling fan is working. If the fan is working and the temperature gauge needle has not returned to its normal position within the time then stop the engine and proceed as follows:

CAUTION: Do not open the bonnet if you can see or hear steam or coolant escaping from the engine compartment. Wait until no steam or coolant can be seen or heard before opening the bonnet.

Do not remove the radiator or reservoir cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which could cause serious personal injury.

If no steam or coolant can be seen or heard, raise the bonnet. If the coolant is boiling, wait unit it stops before proceeding. Look at the coolant level in the see-through reservoir.

If the coolant level in the reservoir is lower than the "MIN" line, look for leaks at the radiator hoses and connections, heater hoses and connections, radiator and water pump. If you find major leaks, or spot other problems that may have caused the engine to overheat, do not run the engine until these problems have been corrected. If you do not find a leak or other problem, then the cooling system reservoir should be filled to the "MAX" line with specified coolant, see Chapter 7 for location if unsure.

ENGINE OVERHEATING

Do not over fill the reservoir. The radiator filler cap should not be removed unless necessary. The coolant level should be checked regularly when the engine is cold. Supplement inhibitors or additives claiming to provide increasing cooling capability that have not been specifically approved by Isuzu-General Motors Australia Limited are not recommended for addition to the cooling system. It is the owner's responsibility to keep the freeze protection at a level commensurate with the temperature which may occur in the area of vehicle operation.

CAUTION: Do not remove the radiator or reservoir cap if the engine is still hot because the cooling system will blow out scalding fluid and steam under pressure which is likely to cause serious personal injury and loss of coolant.

After taking one or more of the actions above and once the temperature gauge no longer signals an overheat condition you can resume driving at a reduced speed. Return to normal driving after ten minutes if the temperature gauge does not again show an overheat condition.

If overheating occurs again you should have the vehicle attended to, as soon as possible, by a qualified mechanic.

NOTE: The engine may temporarily operate at high temperatures during more demanding operating conditions, especially on very hot days. These conditions include:

- climbing a long hill
- stopping immediately after high speed driving
- idling for long periods in traffic
- towing a heavily laden trailer or caravan.

You should avoid operating your vehicle for prolonged periods in any of the above circumstances if the temperature gauge indicates high engine coolant temperature. It may also be an advantage to turn the off the air conditioner (if fitted) in these circumstances.

FLAT BATTERY

CAUTION: DO NOT "push start" or "tow start" your vehicle. If unburnt fuel were to reach the catalytic converter and ignite, the converter could overheat or be destroyed by backfire. Therefore, if the battery is flat, you can "jump start", but not "push start" your vehicle.

If your vehicle will not start due to a discharged battery, it can often be started by using energy from another battery - a procedure called "jump starting".

However, if after reading the following procedure you are still unsure about "jump starting" we strongly recommend for your safety and that of your vehicle that you leave the starting to a competent mechanic.

Jump starting

CAUTIONS:

Batteries produce explosive gases, contain corrosive acids and supply levels of electrical current high enough to cause burns. Therefore, to lessen the chance of personal injury when working near a battery:

- Do not expose the battery to open flames or sparks. Battery action generates hydrogen gas which is flammable and explosive.
- Do not smoke near a battery.
- Do not use jumper leads which are in any way damaged, either with loose clamps or missing insulation.
- Wear eye protection such as industrial safety glasses and avoid leaning over the battery whenever possible.
- Do not allow battery acid to contact eyes or skin. Flush any contacted area with water immediately. In case of eye contact you should get medical help. Battery acid will also damage paint and fabrics if not washed off immediately.
- Be sure any batteries that have filler caps are properly filled with fluid.
- Remove rings, metal watch bands and other metal jewellery before working around the battery.
- Carefully follow each step in the jump starting procedures.
- Never use a quick charger to start your engine.

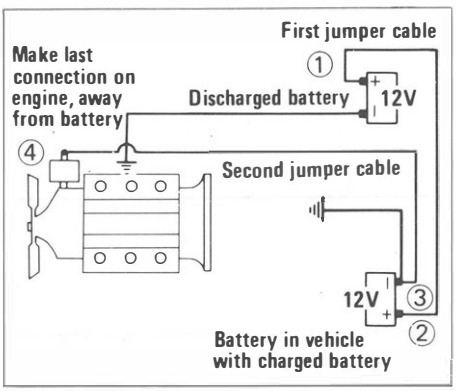
FLAT BATTERY

1. The battery in your vehicle has a negative earth and a 12 volt rating. The battery in the other vehicle **MUST** also have a negative earth and a 12 volt rating.

2. Position the two vehicles so that they are NOT touching, apply the park brakes, put automatic transmission in PARK, manuals in NEUTRAL. Turn ignition to LOCK and switch off all lights and accessories in both vehicles, except the hazard warning flasher or any lights needed for the work area.

3. Attach one end of the RED jumper lead to the positive terminal of the booster battery (identified by a red colour, + or P) and the other end of the RED jumper lead to the positive terminal of the flat battery.

4. Attach one end of the BLACK jumper lead to the negative terminal of the booster battery (identified by a black colour, - or N) and the other end of the BLACK jumper lead to a solid stationary, metallic point on the engine of the vehicle with the flat battery. DO NOT CONNECT DIRECTLY TO NEGATIVE TERMINAL OF VEHICLE'S BATTERY.



5. When making all connections take care that the jumper lead clamps do not touch each other. Also, ensure that jumper leads are not on or near pulleys, fans or other points that will move when the engine is started.

6. Start the engine in the vehicle with the good battery and run the engine at a moderate speed. Then start the engine with the flat battery. Attempts to start the engine should not last longer than 15 seconds and should have an interval of 1 minute between attempts.

7. After starting, allow both engines to idle for approx. 3 minutes with the leads still connected.

8. Leave the engine running while removing the jumper leads - in the exact reverse order they were installed. While removing each clamp, take care that it does not touch any other metal while the other end remains attached.

TOWING A VEHICLE

Proper lifting or towing equipment is necessary when lifting or towing the vehicle to prevent damage during any towing operation. Country, State and Local laws must be followed. In an emergency, your vehicle may be towed on all four wheels in the following manner:

- Fit the towing equipment to the main structural members of the vehicle. Do not attach to the bumpers or brackets.
- Place transmission in neutral position, release the park brake and ensure the transfer lever is in 2H and the wheel hubs are unlocked.
- For the sake of safety and to prevent damage to the vehicle it is advisable to avoid jerky movements and to drive slowly during towing operations.
- Do not exceed 50 km/h or tow further than 80 km. If exceeding these distances or speeds, disconnect the front and rear drive shafts at front and rear axle carriers and secure them in safe positions. For your safety, securely block the wheels while disconnecting the drive shafts.
- Vehicles with damaged transmissions, drive-lines, axles or steering should not be towed.
- A separate safety chain should be used.

Towing with all 4 wheels on the ground

- Switch the ignition key to "OFF" position to free the steering lock. When indicating a turn or using the wipers, switch the ignition to ON when required.
- Only the driver should be in a towed vehicle.
- Remember that power assist for brakes and power steering will not be available when the engine is off.
- To prevent the entry of exhaust fumes from the towing vehicle into the passenger compartment of your vehicle, close the windows and stop entry of air by moving heating and ventilation controls to "re-circulate" position.

Towing with wheels off the ground

Care should be taken to ensure adequate ground clearance at the opposite end of the vehicle when lifted.

In cases of rear end damage it may be necessary to lift the rear end of the vehicle and tow on the front wheels only. In such cases the steering wheel must be clamped in the straight ahead position using a clamping device designed for towing service use, such as those provided by towing equipment manufacturers. Do not use the vehicle's steering column for this purpose.

The vehicle MUST NOT be towed with the front free wheeling hubs locked, especially if it is to be towed with the rear of the vehicle lifted.

FREEING THE VEHICLE FROM SAND, CIRCUIT BREAKER

Freeing the vehicle from sand

If it becomes necessary to rock the vehicle to free it from sand, mud or snow, move the gear shift lever from second to reverse. Do not race the engine. For best possible traction, avoid spinning wheels when trying to free the vehicle. Use of tyre chains is recommended or temporary assistance when traction is lost on ice or snow.

CAUTION: Wheel spin should not exceed 55 km/h as indicated on the speedometer. Unless care is taken in limiting rear wheel spin, one spinning wheel can reach excessive speeds, resulting in possible tyre disintegration or differential failure, which could cause personal injury or extensive vehicle damage.

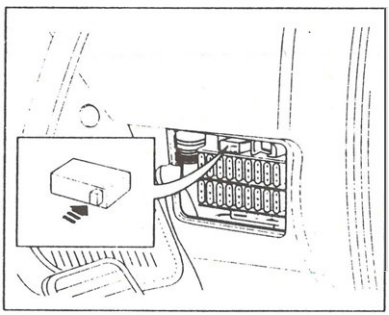
Circuit breaker - electric windows

If the electric window switches do not work (due, say, to overloading) reset the circuit breaker (located with the fuses) under the right hand side of the dash.

First turn the ignition switch off before pushing the knob of the circuit breaker.

The switches should now operate.

However, if they still do not work, or if the circuit breaker immediately goes off again, you should see your Holden Dealer.



FUSES

The main fuse box is located under the dash. A second fuse box is installed under the bonnet, pictured.

If a fuse has been blown out check to locate the cause of trouble and give necessary service attention before replacing the fuse. When replacing the fuse, use a cartridge of the same amperage.

If the replaced fuse also burns out you should see your Holden Dealer.

Caution: When replacing a fuse be sure to use a fuse of the specified amperage, as indicated on the fuse box panel cover. Never install a wire or similar for replacement as it may cause a fire hazard to the vehicle.

FUSE BOX UNDER DASH

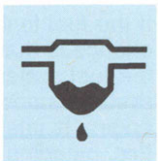
C-1	10A	Starter
C-2	15A	Seat heater
C-3	10A	Turn signal light, reverse light
C-4	10A	Elect. ig.
C-5	15A	Windscreen wiper, washer
C-6	10A	Rear wiper, washer
C-7	10A	Headlight wiper
C-8	15A	Engine
C-9	15A	Petrol - ignition coil Diesel - fuel cut
C-10	10A	Meter Gauge
C-11	10A	Audio, electric mirrors
C-12	20A	Cigarette lighter
C-13	10A	Anti theft
C-14	15A	Stop lights, auto trans
C-15	20A	Audio
C-16	10A	Clock
C-17	25A	Demister
C-18	20A	Electric door locking
C-19	25A	Blower
C-20	10A	Air conditioning
C-21	10A	SRS -1
C-22	10A	SRS - 2
Circuit break	30A	Electric window, power seat, sunroof

FUSE BOX UNDER BONNET

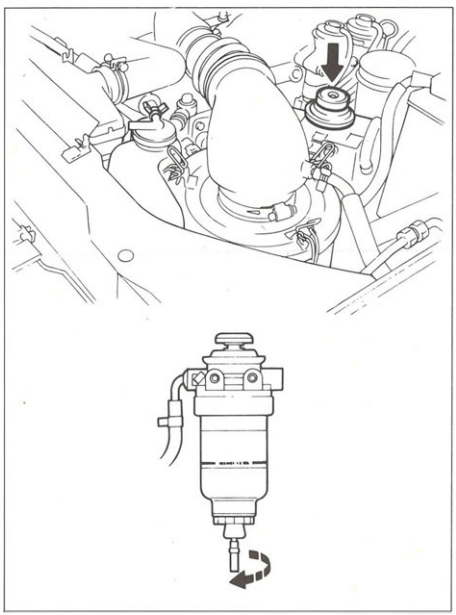
F-1	10A		Rear sublamp
F-2	Petrol	10A	O2 senser heater
	Diesel	-	-
F-3	15A		Horn, hazard
F-4	15A		Left headlight
F-5	15A		Right headlight
F-6	-		
F-7	-		
F-8	20A		Front fog lights
F-9	20A		ABS
F-10	Petrol	15A	Fuel pump
	Diesel	-	-
F-11	-		
F-12	15A		Tail
FL-1	80A		Main
FL-2	50A		Starter switch
FL-3	Petrol	30A	ECM
	Diesel	40A	Ceramic heater
FL-4	-		
FL-5	Petrol	-	-
	Diesel	50A	Glow
FL-6	40A		ABS

DRAINING WATER SEPARATOR (diesel)

The fuel filter has a sedimentor chamber for settling water separated from fuel. If the indicator glows on the instrument panel the water in the sedimentor chamber must be drained.



Open the bonnet and place a small container (approximately 0.2 litre capacity) at the end of the vinyl hose beneath the drain plug on the separator.



Loosen the drain plug by turning it approximately 5 turns anti-clockwise. Operate the manual pump up and down about 10 times until about 0.1 litres of water has been drained.

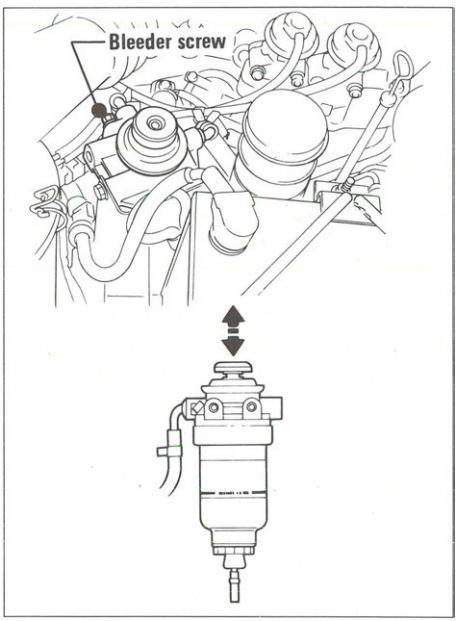
After draining, securely tighten the drain plug by turning it clockwise. Operate the manual pump up and down several times.

After starting the engine, check to see that no fuel leaks from the drain plug. Also check to see that the indicator light has turned off.

If the water separator requires frequent draining, have the fuel tank drained for removal of water at your Holden Dealer.

BLEEDING FUEL SYSTEM (diesel)

If the fuel tank has been emptied, the chance is that air might have entered the fuel system. With air in the fuel system, smooth flow of fuel into the engine is interrupted and to correct this, bleeding of the fuel system should be performed after refuelling.



1. With a wrench or screwdriver, loosen the bleeder screw on the fuel filter.

2. Operate the priming pump up and down until fuel comes out. Continue pumping until no air bubbles appear in the fuel being pumped out.

3. After bleeding, securely tighten the bleeder screw clockwise.

4. Operate the priming pump up and down several times.

Notes

CHAPTER 7

Weekly checks

Page

7-2 Miscellaneous checks
7-2 Service manuals
7-3 Check locations
7-4 Engine oil level check
7-6 Engine coolant level check
7-7 Auto trans fluid level
7-8 Brake fluid level check
7-9 Clutch fluid level check
7-10 Power steering fluid level check
7-11 Washer fluid level check
7-12 Battery
7-13 Tyre air pressure
7-14 Tyres (general)
7-16 After crossing water

MISCELLANEOUS CHECKS

As well as taking your vehicle to be serviced (refer Chapter 12) there are a few simple, weekly checks that the owner (or Nominee) is required to make. These are shown on the following pages.

CAUTION: Engine cooling fans can start working unexpectedly, even when the engine is not running. To avoid injury from the fan, make sure the ignition key is switched OFF, so that the fan cannot start operating.

CAUTION: Electronic ignition systems have a high ignition power. Do not touch the ignition system; this could be highly dangerous.

The following checks should also be regularly done to ensure safety of your vehicle.

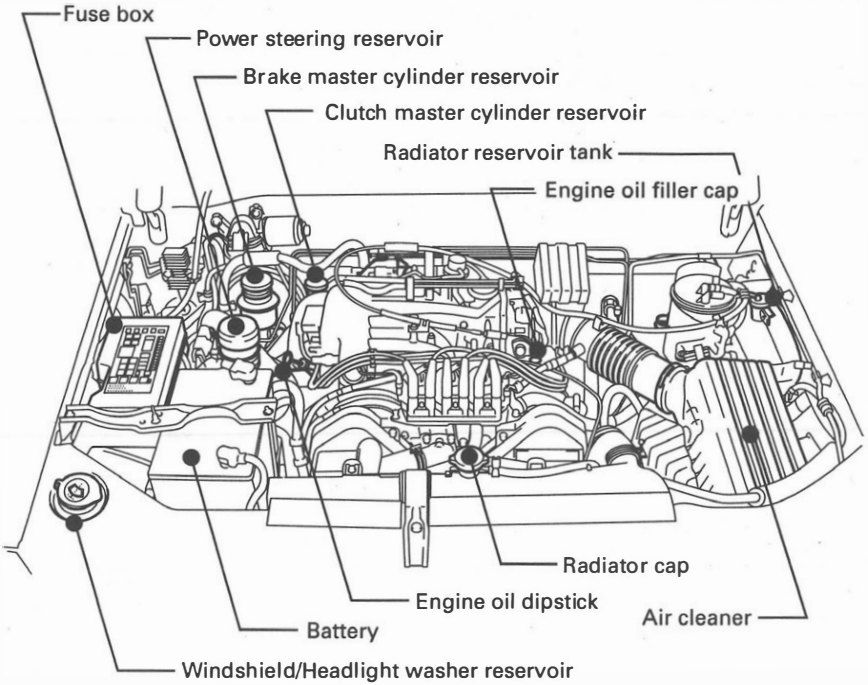
- that all exterior lights are working and that their appropriate interior indicators light up when in operation.
- mirrors and glass are clean and not scratched.
- automatic transmission T-bar indicator correctly lines up next to the gear selected.
- the aim of water on the windscreen and condition of the wipers
- demister operates
- horn works.
- all seat belt condition and operation (give it a sharp tug to make sure that it will 'lock' if necessary) and check that buckles are clean and operating correctly. Remember that seat belts must never be worn twisted.
- oil/fluid leaks
- be alert for any changes in steering action. An inspection of the steering is needed when the steering wheel is harder to turn or has too much free play or if there are unusual sounds when turning.
- be alert to any changes in the sound of the exhaust system or any smell of fumes.

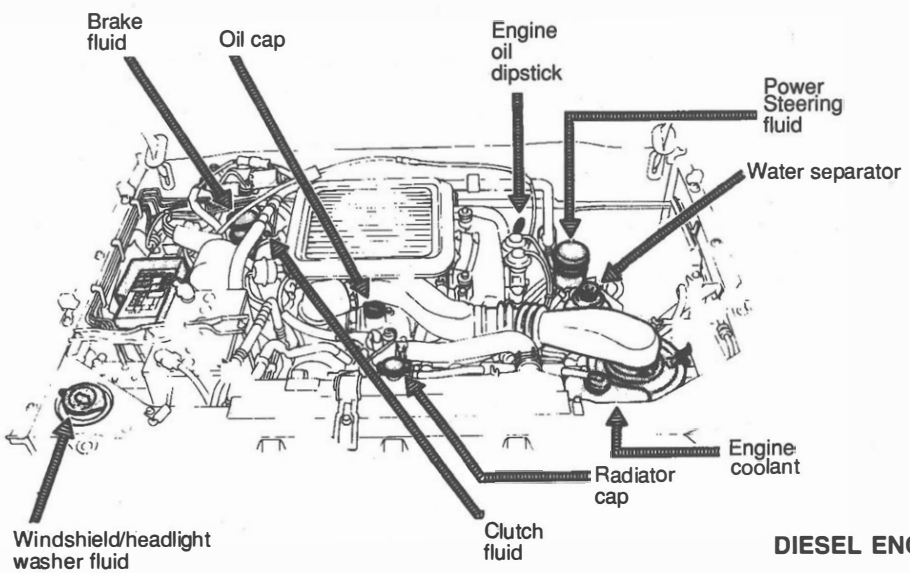
Service manuals

Service manuals are available from your Dealer.

CHECK LOCATIONS

PETROL ENGINE





DIESEL ENGINE

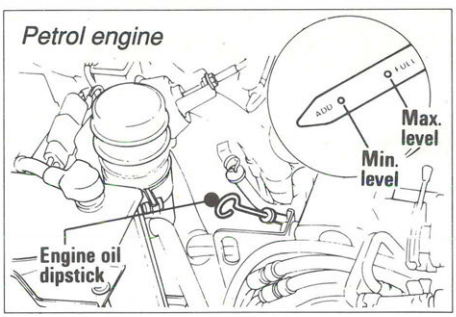
ENGINE OIL LEVEL

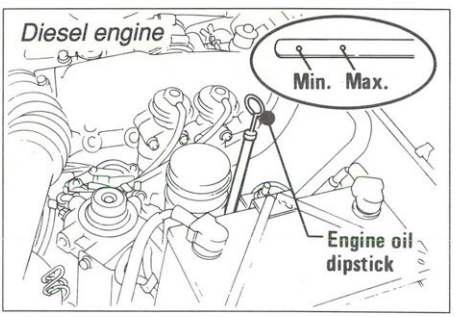
It is the owner's responsibility to check the oil level weekly. The best time to check the engine oil level is when the oil is warm, such as during a fuel stop.

To check the oil level accurately, the vehicle must be on level ground. After turning off the engine, wait a few minutes for the oil to settle.

The level is checked from the dipstick which is located on the driver's side of petrol engines and on the passenger's side of diesel engines.

Remove the dipstick and wipe it clean with a clean cloth or paper. Insert the dipstick firmly all the way down, pause for a second then withdraw the dipstick and look at the oil level on it. The oil level should be maintained between the two marks, neither going above the maximum mark nor under the minimum mark. Remember to re-insert the dipstick firmly after taking the reading.





- **Petrol** engines use SG or SH grade engine oil 20W/50 for normal use. For prolonged use in snow areas, the use of 15W/40 is recommended.

- **Diesel** engines use CD or CE grade engine oil SAE30 (single grade) or 15W/40 (multigrade)

If you need to add oil, remove the oil cap on top of the engine. Pour the required oil into the opening. Wait a few minutes for the oil to settle. Then check the oil level with the dipstick again. If still too low, add more oil. When correct, replace the cap and the dipstick. If you check the oil level when the oil is cold do not run the engine first. The cold oil will not drain back into the oil pan fast enough to give a true oil level reading.

NOTE: Non-detergent, recycled, reclaimed and other low quality oils are specifically not recommended. The use of break-in oils, tune-up compounds, friction-reducing compounds and other supplemental additives are not recommended; their use will only increase operating costs.

ENGINE OIL CONSUMPTION

Every internal combustion engine uses a certain amount of oil, especially when running-in. The engine is dependant on oil for lubricating the cylinder walls, pistons, rings and valve stems. A thin film of oil is left on the cylinder walls, some of which is carried into the combustion chamber and burnt during the combustion process. This also applies to the film of oil on the valve stems which is drawn into the combustion chamber and burnt.

There are several other factors that contribute to the rate of oil consumption in your engine: worn pistons, rings, valve stems and guides; the way in which the vehicle is operated; the quality and grade of oil; the oil level, and dilution of the oil.

• Operation of the vehicle

High speed driving and heavy towing increases engine temperature, which lowers oil viscosity, causing more oil to reach the combustion chamber and get burnt away.

• Quality and grade of oil

Oil viscosity is a significant factor in oil consumption. If you use an oil which is too "thin" (low viscosity) your oil consumption will increase. Use only the recommended grades of oil.

• Oil level

Maintaining a proper oil level is also an important factor in controlling oil consumption. An over full engine will splash oil onto the cylinder walls in quantities greater than the piston rings can control. This excess oil will be drawn into the combustion chamber and burnt, or may result in aeration of oil in the sump causing damage to the engine.

• Dilution

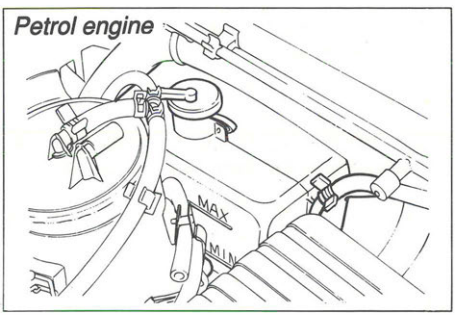
Probably the most prevalent complaint of oil consumption comes from the driver whose vehicle is frequently driven at below normal operating temperatures. The oil becomes diluted by fuel and moisture which settles in the oil pan and may even raise the oil level creating a false reading on the oil level dipstick. For example, in a vehicle that has accumulated 1,500 km of short distance or intermittent city operation and has consumed a normal amount of oil, the level may not have dropped from the FULL mark, due to dilution. If this vehicle is driven for some distance at highway speeds on a warm day, the dilution elements evaporate, lowering the oil level and the motorist assumes the oil "lost" has been consumed in the highway operation.

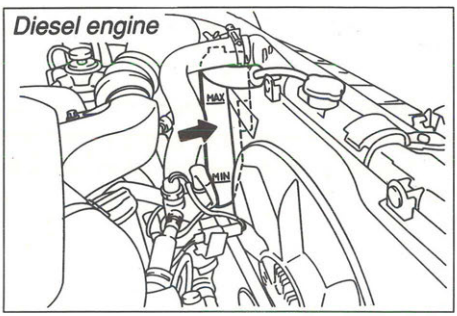
If, after taking into account the above factors you are still concerned that your engine has excessive oil consumption then you should discuss the situation with a Holden Dealer. Remember that an engine's oil consumption should not be judged until it has run at least 7,000 km.

ENGINE COOLANT LEVEL

The level of coolant should be checked at least weekly, by looking at the level in the coolant reservoir. This is located next to the passenger's side headlight.

When the engine is cold, the coolant level should be at or above the minimum mark on the container. After the vehicle has been driven and the engine is at normal operating temperature, the level should be somewhere between half full and the maximum mark on the container. DO NOT OVERFILL.





The LONG LIFE COOLANT in your vehicle conforms to specification number HN 2043. This can be purchased as:

M40236 (1 litre) M40307 (5 litres) M40238 (20 litres)

If the container requires topping up, first mix a solution of 50% LONG LIFE COOLANT and 50% water. Flip up the cap on the top of the container, add the solution and secure the cap.

Failure to use the coolant meeting Holden's specification or maintaining the specified concentration may result in voiding your warranty. In emergency situations, plain water may be used temporarily in the cooling system until the correct Holden's LONG LIFE COOLANT is obtained as soon as possible from the nearest Holden Dealer.

It should be noted that the specified LONG LIFE COOLANT contains special corrosion inhibitors for the best corrosion protection of your engine and cooling system. This LONG LIFE COOLANT also gives your cooling system greater hot weather protection by increasing the boiling point and in addition provides protection in cold weather conditions down to -20°C, provided the correct concentration is maintained.

If the recommended brand of coolant/anti-freeze fluid is not available, the radiator and cylinder case MUST be drained before parking in regions where temperatures of 0°C or below are encountered. This is to prevent possible bursting of the radiator, or cracking of the cylinder block, which can occur if the coolant freezes. Even so, damage to the heater core may still occur. Therefore, the use of the correct anti-freeze/coolant is recommended.

If you regularly have to top up the container you should see your Holden Dealer for a cooling system check.

CAUTION: Corrosion inhibitors and anti-freeze fluids are poisonous. Use extreme care when handling. If swallowed seek medical attention.

Refer to Chapter 6 if engine overheats.

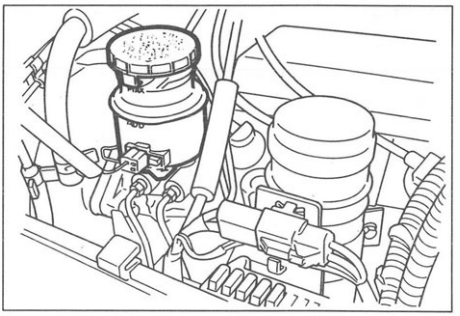
AUTOMATIC TRANSMISSION LEVEL

The automatic transmission fluid level will be checked by your Holden Dealer when the vehicle is serviced.

If an oil leak is seen before the service is due you should consult a Holden Dealer as soon as possible.

The transmission fluid level should be replaced at the intervals shown in Maintenance Schedule, shown in Chapter 12.

BRAKE FLUID LEVELS



The brake fluid level in the master cylinder should be checked regularly in conjunction with checking the oil and coolant levels. The fluid level, visible through the "see through" master cylinder should be maintained between the level markings on the master cylinder. If the fluid is between these levels do not remove the master cylinder cap. Remember that brake fluid exposed to the atmosphere will quickly absorb moisture which in turn lowers the boiling point of the fluid as well as increasing the risk of corrosion of brake components.

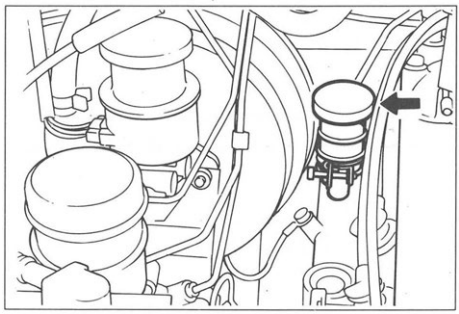
If fluid needs to be added, unscrew and lift off the top cover. Top up with DOT-3 brake fluid. Ensure that the diaphragm inside the cap is in shape before securing the cap.

Take care when handling brake fluid. Flush with lots of water is spilt on skin or your vehicle. If it gets in your eyes, flush with lots of water and see a doctor as soon as possible.

NOTE: Use only new brake fluid. Use of an old, used or inferior brake fluid may endanger the functioning of the brake system.

If the master cylinder requires constant topping up it could indicate that a malfunction exists in which case it should immediately be brought to the attention of your Holden Dealer. A gradual drop in fluid level usually occurs over a long period as the brake pads and linings wear out. This is normal. *The brake fluid must be replaced every 2 years.*

CLUTCH FLUID LEVEL



If your vehicle is fitted with a manual transmission then the clutch fluid level should be checked weekly. The level should be maintained between the minimum and maximum markings.

The same fluid is used for both the brake system and the clutch system. So, if fluid needs to be added use DOT-3 brake fluid. Take care when handling the fluid. Flush with lots of water if spilt on skin or your vehicle. If it gets in your eyes, flush with lots of water and see a doctor as soon as possible.

If fluid often needs to be added, see your Holden Dealer to have the clutch checked.

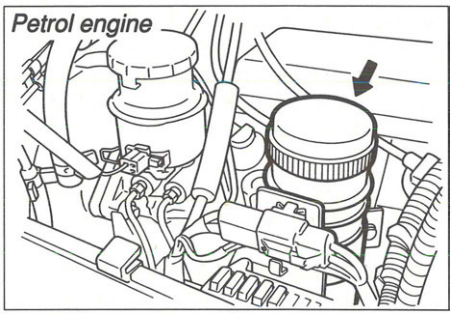
POWER STEERING FLUID LEVELS

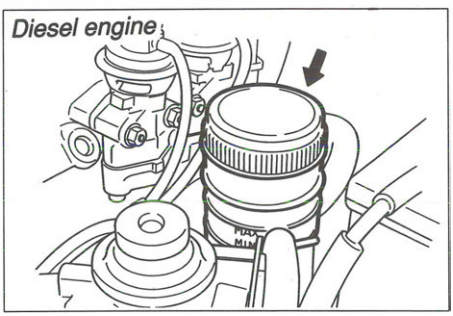
The level of fluid in the power steering reservoir should be checked weekly.

The best time to check is after the vehicle has been driven for a while, so that the fluid is warm. A convenient time to do this is at a fuel stop.

The level should be maintained between the level markings on the outside of the reservoir.

If fluid needs to be added, use DEXRON® III. Do not fill over the maximum level and remember to replace the cap tightly. If you often need to add fluid, you should see your Holden Dealer to have the power steering system checked.



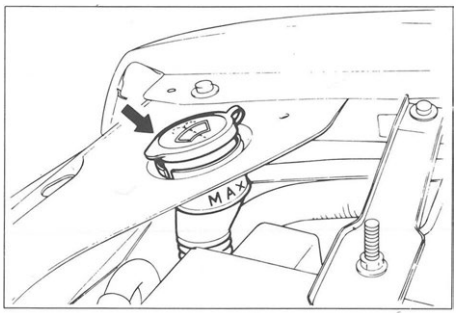


WASHER FLUID LEVEL

NOTE: Damage to the washer motor may result if a washer button is held depressed when the washer tank is empty. Front and rear washer tanks should be frequently checked and topped up. The more often washer water is used (as in bad weather) the more often the level should be checked.

Windscreen/headlight washer container

To check the level, flip up the cap. The level should never read below the empty mark. Add fluid to bring the level to the MAX mark on the outside of the container.



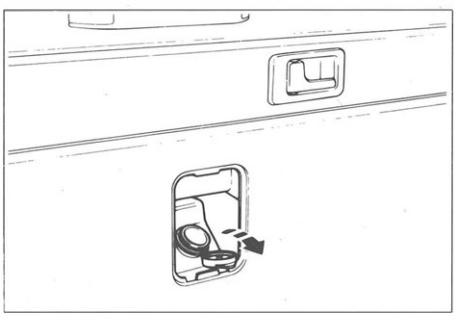
The container should be filled only with plain water or Optikleen (part no. M37068). Do not use ordinary soap or detergent as these not only froth up but may damage the wiper rubbers.

Make sure the cap is secured.

Rear window washer container

The washer container is installed inside a panel in the tailgate.

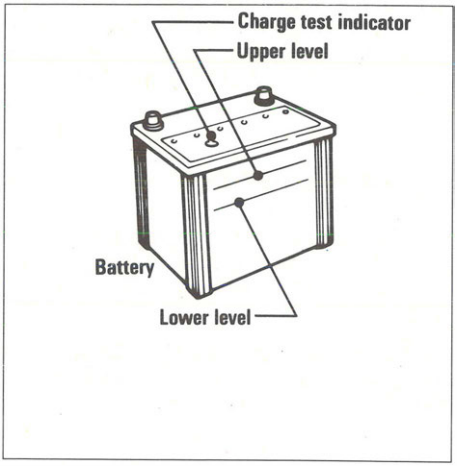
The container should be filled only with plain water or Optikleen.



BATTERY

Battery without filler caps

You will never have to add water. The test indicator in the top of the battery is provided for information testing purposes only.



Battery with removable filler caps

The fluid level of the battery will be checked for you when you take your vehicle to be serviced by your Holden Dealer. If your vehicle is operated in hot temperatures or at constant high speed, the battery fluid level should be checked at least twice between the 6 month Dealer Service.

CAUTION:

Batteries emit an explosive gas mixture which may be ignited by sparks or naked flames. You should therefore keep sparks and flames away from the battery at all times. Never smoke near a battery.

Batteries contain sulphuric acid. If acid contacts skin or clothing, flush immediately with a lot of water. In case of eye contact, flush with a lot of water and contact a doctor immediately.

Take care with all metal objects and tools including items you may wear (e.g. jewellery, ring and metal watch bands) near battery terminals. Metal objects that touch battery terminals can cause sparks and serious heat burns to the user or wearer.

When checking the battery level, make sure the engine is not running. Each of the six cells must be individually checked. Use distilled water, as required, to keep the level just below the bottom of each split tube. DO NOT OVER FILL.

Refer Chapter 6 for emergency starting when the battery is flat.

TYRES

Tyre air pressure

Checking the air pressure of your tyres (including the spare) ensures your SAFETY, as well as reducing fuel consumption and increasing the life of your tyres.

Make sure your vehicle will handle at its best - CHECK THE PRESSURES WEEKLY. For constant long distance or rough road travelling, daily checking is recommended.

Refer to the tyre placard for the correct pressure for your tyres. This is located on the driver's door lock pillar, visible when the door is open. Tyre pressures are also listed in Chapter 8.

Tyre inflation pressure increases when the tyres have been driven more than 1.5 km. The pressure should be checked when the TYRES ARE COLD (stationary for over 3 hours).

Always use a TYRE PRESSURE GAUGE to check the tyres - simply looking at the tyres is not sufficient, as under inflated radial tyres may look similar to correctly inflated radial tyres.

Remember to put back any valve DUST CAPS or EXTENSIONS if so equipped. This stops dirt and moisture from fouling the valves. Damaged dust caps should promptly be replaced.

Your tyres must be inflated to the correct cold inflation pressures (as listed on the tyre placard) in order to load the vehicle to the maximum weights given in Chapter 3. Too low an air pressure causes increased tyre flexing and heat build-up. This weakens the tyre and increases the chance of damage of failure. It can result in tyre overloading, abnormal tyre wear, adverse vehicle handling and reduced fuel economy. Too high an air pressure can result in abnormal wear, harsh ride and can increase the chance of damage from road hazards.

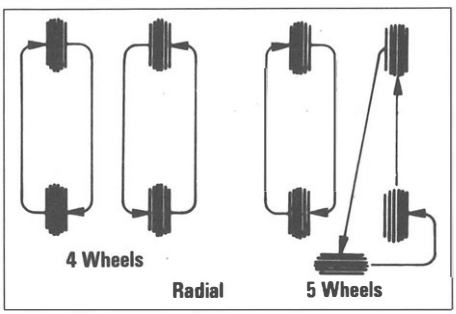
When checking the tyre air pressure, take a look at the condition of the TYRE TREAD for stones or abnormal wear.

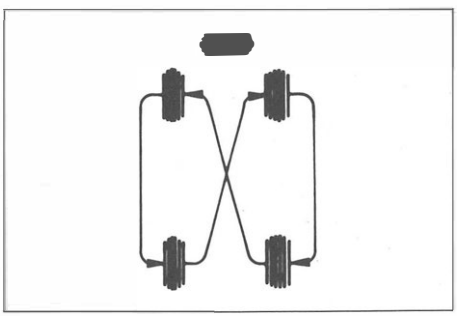
Alignment and balance

If no abnormal or uneven wear is evident and if you have not experienced any vibration, tyres need not be rotated. Wear can be evened out by rotating the tyres.

Your Holden Dealer will be able to diagnose any unusual signs of wear and can also balance the wheels and tyres or correct the wheel alignment if necessary.

The optional "X" pattern rotation is acceptable when required for more uniform tyre wear.





TYRES cont.

Tyre replacement

To avoid unpredictable handling, always have exactly the same tyres of all 4 wheels. That is, the same manufacturer, model and size. Especially, don't mix different ply tyres on your vehicle.

Wrong combinations of replacement tyres and wheel may result in change to tread measurement, resulting in unpredictable handling and stress to steering and suspension. Use only the tyres the wheels approved for your vehicle.

Whenever possible, all 4 tyres on a 4WD vehicle should be replaced at the same time.

If you replace all tyres with tyres of a different size, your speedometer readings may be affected. Have the vehicle checked afterwards.

Tyres with a higher speed rating and/or with a maximum load rating in excess of that listed on the tyre placard are acceptable as replacements, provided they are fitted to a suitable rim size. This does not however mean that your vehicle can carry loads greater than those listed in Chapter 10. Uneven or abnormal tyre wear is usually the result of incorrect inflation pressure, improper wheel alignment, wheels being out of balance, or poor driving habits.

The original equipment tyres incorporate built-in tread wear bars which act as indicators to assist in determining when the tyres have worn excessively. When the wear bars appear, the tyre should immediately be replaced.

Tread wear indicators

Wheel replacement

Wheels should be replaced if damaged, for example if rusted, bent, cracked or if wheel nuts often become loose. Steel wheels that allow air to leak should be replaced, aluminium wheels can often be repaired.

Replacement with used wheels is not advised as they may have been subjected to harsh treatment and could fail without warning.

When replacing wheels for any reason, ensure that the new wheels are equivalent in diameter, rim width, offset and mounting configuration to those originally installed in your vehicle. A wheel(s) of the wrong size or type can affect load carrying capacity, wheel and bearing life, brake cooling, speedo accuracy, stopping ability, headlight aim, bumper height, vehicle ground clearance and tyre chain clearance.

Before fitting wheels, remove any build-up corrosion on the mounting surface and brake disc mounting surface by scraping and wire brushing. Installing wheels without good metal-to-metal contact can cause the wheel nuts to loosen, which could result in a wheel coming off while driving.

TYRES cont.

Tyre traction

When driving on wet or slushy roads, it is possible for a wedge of water to build up between the tyre and road surface. This phenomenon, known as hydro-planing, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed.

1. Reduce speed levels during rainstorms or when roads are slushy and if the road has standing water or puddles.
2. Replace tyres when tread is worn down to 1.6 mm.
3. Check that tyres are properly inflated.

Vehicle speed should be limited to 120 km/h if your vehicle is fitted with passenger car-type snow tyres.

Tyre damage and repair

Tyres with cuts, splits or cracks deep enough to expose the fabric, should be replaced. Bulges (indicating internal damage) should also be replaced. Tyres with doubtful damage should be removed from the wheel and examined by a competent person.

If a pressure loss occurs while driving, do not attempt to drive on the deflated tyre more than is necessary to stop safely. Driving even a short distance on a deflated tyre can damage it beyond repair.

When puncturing objects are removed, repairs will have to be made according to the recommendations of the tyre manufacturer. If the tyre has a puncture or cut that can't be repaired due of the size or location, then the tyre must be replaced.

It should always be remembered that a tyre which has been repaired will not be able to be operated safely at the rated maximum speed and due care should be taken.

Snow chains and tyres

Chains

- Install the chains on the rear tyres only.
- Do not exceed 70 km/h or the chain manufacturer's suggested speed limit, if lower.
- Drive in a restrained manner and avoid large bumps, potholes, severe turns or other manoeuvres which could cause the vehicle to bounce up and down.
- Follow the chain manufacturer's instructions.

Tyres

If your vehicle has snow tyres, be sure they are the same size, load range and construction type as your other tyres. Vehicle speed should be limited when equipped with snow tyres.

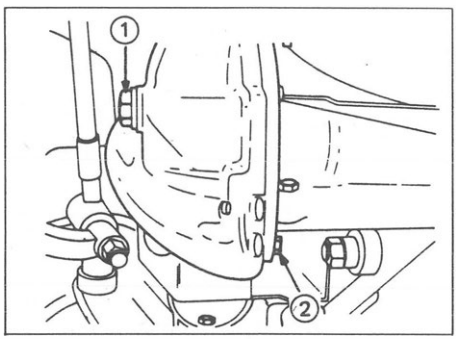
AFTER CROSSING WATER

The following levels will be checked for you when you take your vehicle to your Holden Dealer for servicing. It is recommended that after crossing deep water the following oil levels should be checked as soon as possible:

- rear axle
- front axle
- transfer case
- engine (see earlier in this Chapter)
- automatic transmission or manual transmission

If the level has increased (indicated by fluid running out of the filler hole) it could be caused by water entry. The water is heavier than oil and will therefore sit on the bottom. If the level is increased, drain a cupful of oil from the drain plug to check for water contamination or colour change (the oil should be clear). If there is any evidence of water the oil should be replaced so as to avoid serious vehicle damage. If you are unsure, you should contact your Holden Dealer.

Front axle



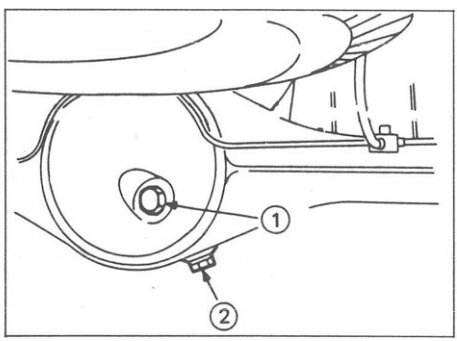
To ensure a correct reading, the vehicle should be parked on a flat surface. For your safety, check that the T-bar lever is in Park and the park brake firmly applied.

Remove the filler plug ① and feel inside the hole with your finger. The oil should come to the bottom edge of the hole. Replace the plug and tighten it.

The correct type of oil is listed in Chapter 8.

After replacing the plug, visually check the transfer case for leaks or damage. Hole ② is the drain plug.

Rear axle



To ensure a correct reading, the vehicle should be parked on a flat surface. For your safety, check that the T-bar lever is in Park and the park brake firmly applied.

Remove the filler plug ① and feel inside the hole with your finger. The oil should come to the bottom edge of the hole.

The correct type of oil is listed in Chapter 8.

Replace the plug and tighten it.

After replacing the plug, visually check the transfer case for leaks or damage. Hole ② is the drain plug.

AFTER CROSSING WATER

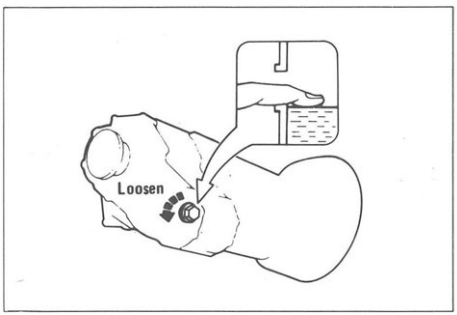
Automatic transmission fluid and manual transfer case oil

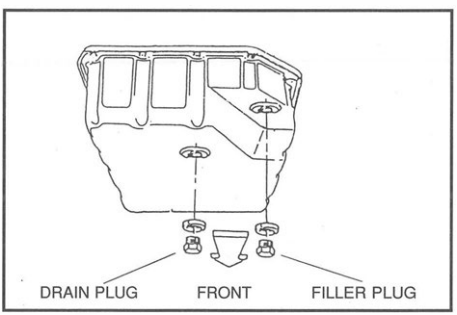
To ensure a correct reading, the vehicle should be parked on a flat surface. For your safety, check that the T-bar lever is in Park and the park brake firmly applied.

See the scheduled maintenance list in Chapter 12 to find out how often the lubricant level should be checked.

Check that the fluid level reaches the plug hole by removing a filler plug on the transfer case. If the fluid level is low, refill the case up to the filler plug hole.

After replacing the plug, visually check the transfer case for leaks or damage.





Manual transmission oil and manual transmission transfer case oil

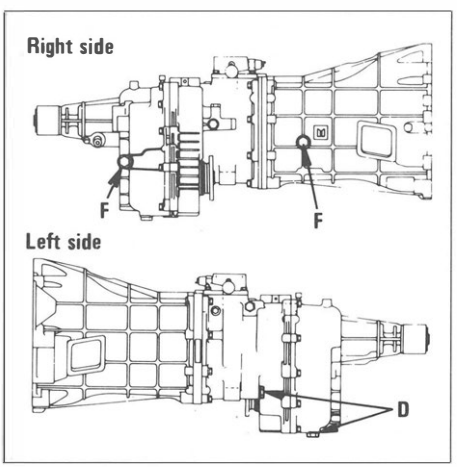
To ensure a correct reading, the vehicle should be parked on a flat surface. For your safety, check that the gear lever is in gear and the park brake firmly applied.

F = Filler plug

D = Drain plug

Remove the filler plug and feel inside the holes with your finger. The oil should come to the bottom edge of the hole. Replace the plug and tighten it. Use the same oil in the manual transmission and the transfer case as is used in the engine.

After replacing the plug, visually check the transfer case for leaks or damage.



CHAPTER 8

Specifications

Page

8-2 Engines
8-3 Transmissions
8-3 Axles
8-4 Brakes
8-4 Steering
8-4 Clutch
8-5 Lubricants
8-5 Wheel alignment
8-6 Dimensions
8-6 Tyre pressures
8-7 Electrical
8-8 Identification plates

ENGINES

Engine		PETROL - 6VD1	DIESEL - 4JG2
Description		6 cylinder, 24 valve, overhead cam, electronic fuel injection	4 cylinder, turbo, overhead valve
Piston displacement		3,165 cc	3,059 cc
Compression ratio		9.3 : 1	20.0 : 1
Power		130 kW @ 5,200 r.p.m.	84 kW @ 3,600 r.p.m.
Torque		260 Nm @ 3,750 r.p.m.	260 Nm @ 2,000 r.p.m.
Valve clearance (cold)	Intake	Non adjustable, hydraulic	0.40 mm
	Exhaust		0.40 mm
Oil	Capacity	6.0 litres (with filter) 5.3 litres (without filter)	6.0 litres (with filter) 5.0 litres (without filter)
	Specification	SG or SH grade oil. For normal use, 20W/50 viscosity is recommended. For prolonged use in snow ares, the use of 15W/40 is recommended.	CD or CE grade diesel engine oil SAE 30 (single grade) or 15W/40 (multigrade)
Coolant	Capacity	8.8 litres - auto trans 8.5 litres - manual trans	8.6 litres
	Specification	50 % water and 50 % Long Life Coolant conforming to Holden's specification no HN 2043, part no. M40236 (1 litre) or M40307 (5 litres)	

TRANSMISSIONS and AXLES

Transmission & transfers

		MANUAL	AUTOMATIC with torque converter
Gear Ratio : 1	1st	3.767	2.856
	2nd	2.248	1.618
	3rd	1.404	1.000
	4th	1.000	0.723
	5th	0.809	-
	Rev	3.873	2.000
	High	1.000	1.000
	Low	2.051	2.051
Transmission oil capacity		2.95 litres	8.6 litres (dry fill) 3~8 litres (service fill), refer page 6-8
Transfer oil capacity		1.45 litres	1.45 litres
Transmission oil spec		Use same oil as used in engine, or SAE 5W/30 or gear oil 75W/85	Dexron® III Automatic Transmission Fluid
Transfer oil spec		Use same oil as used in engine, or SAE 5W/30 or gear oil 75W/85	

Rear axle

Ratio	Manual trans petrol = 4.300 : 1 Auto trans petrol = 4.555 : 1 All diesel = 4.555 : 1
Oil cap.	1.8 litres
Oil type	GL5 grade for Limited Slip Diff and 1 bottle additive Part no 1052358
Viscosity	SAE 85W/140

Front axle

Ratio	Manual trans petrol = 4.300 : 1 Auto trans petrol = 4.555 : 1 All diesel = 4.555 : 1
Oil cap.	1.5 litres
Oil type	GL5 grade for limited Slip Differential
Viscosity	SAE 85W/140

BRAKES, STEERING, CLUTCH

Brakes

Description	Front wheel disc. Rear wheel drum, incorporating park brake acting on rear wheels
Fluid type	DOT 3 brake fluid

Steering

Type	Power
Ratio	15.8 : 1
Oil capacity	1.0 litre
Oil type	Dexron ® III

Clutch

Description	Dry single plate disc with diaphragm spring, hydraulic control
Size	Petrol = 260 mm Diesel = 250 mm
Fluid	DOT 3

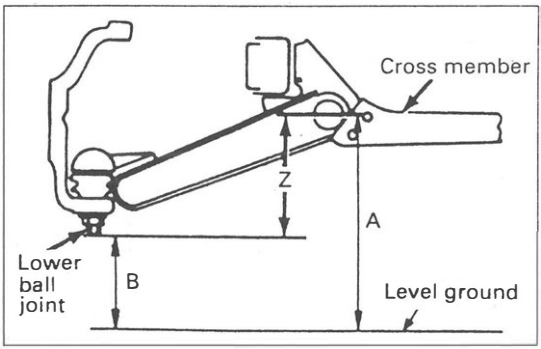
LUBRICANTS, WHEEL ALIGNMENT

General lubricants

Chart system pivot points, bonnet pivots and spring anchor, bonet and door hinges, body door hinge pins and linkage, fuel door hinge rear compartment lid hinges, key lock cylinder	Apply a thin film of light engine oil
Clutch fork joint, bonnet latch release pawl, chassis lubrication, park brake cables, drive shaft yoke, accelerator linkage	Water resistant EP Chassis grease
Door weather-strips, rubber hood bumpers	Lightly coated with a rubber lubricant
Universal joints	Grease containing MoS2 (molybdenum disulfide type grease)

Front wheel alignment

Trim Height (Z): 139 ± 5 mm



Toe-in	0 degrees ± 2 mm
Camber	0 degrees ± 30'
Caster	+ 2 degrees 10' ± 45'

DIMENSIONS and TYRE PRESSURES

Dimensions

Wheelbase	2 door		2330 mm
	4 door		2760 mm
Overall length (including spare tyre)	2 door		4230 mm
	4 door		4660 mm
Overall width	1745 mm		
Overall height (at curb weight)	2 door		1835 mm
	4 door		1840 mm
Minimum ground clearance	215 mm		
Wheel track	Front	215/80 R16	1455 mm
		245/70 R16	1470 mm
	Rear	215/80 R16	1460 mm
		245/70 R16	1475 mm

Tyre pressures

Nominated rim size and tyre size designation	Recommended cold inflation pressure (in kPa) up to maximum load	
	FRONT	REAR
16 x 7JJ 245/70R16 107S	210	240
16 x 7JJ LT 225 / 75R16 106S	210	260
16 x 7JJ LT 235 / 70R16 110/108N	210	260

ELECTRICAL SPECIFICATIONS

Fuses

Refer Chapter 6.

Light bulbs

APPLICATION	BULB	QUANTITY	WATTAGE
FRONT LIGHTS			
Headlight (halogen)	H4	2	60/55 W
Turn signal	P-25-1	2	21 W
Park lights	R19/5	2	5 W
Side turn signal	W10/5	2	5 W
Fog light	H3	2	55 W
REAR LIGHTS			
Reverse	P-25-1	2	21 W
License	W10/5	2	5 W
Tail, Stop	P-25-2	4	5/21 W
Turn signal	P-25-1	4	21 W
INTERIOR ILLUMINATION			
Dome light	-	1	10 W
Map light	-	2	5 W
Luggage compartment light	-	1	8 W
Courtesy light (on door)	194	4 (4 door)	3.8 W
	194	2 (2 door)	3.8 W
Glovebox	-	1	1.2 W
Ashtray	74	1	1.4 W

Battery

Battery specification	Petrol engine with manual transmission	Petrol engine with auto transmission	Diesel engine	Optional battery for diesel engine
Type	55D23R	65D26R	75D26R	95D31R
Voltage	12	12	12	12
Cold cranking performance	356 Amp	420 Amp	490 Amp	622 Amp
Reserve capacity	99 Min	113 Min	123 Min	159 Min

IDENTIFICATION PLATES

Engine number location

Petrol

The engine number is stamped on the passenger's side of the cylinder block near the starter. You can see the engine number through the wheel housing by turning the wheel.

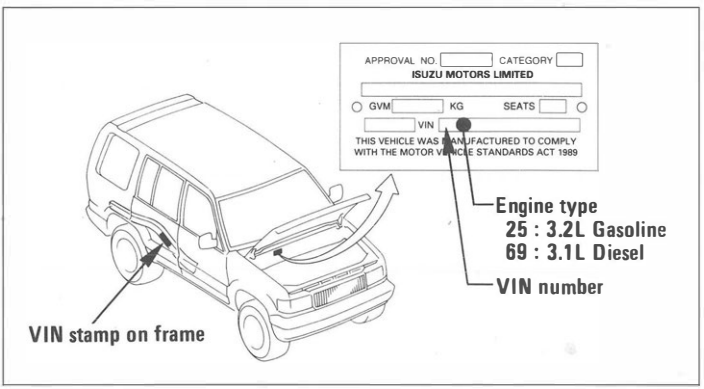
Diesel

The engine number is stamped on the rear passenger's side of the cylinder block.

Vehicle identification number

The individual I.S.O.V.I.N. number is used for identification of parts.

The explanation of the I.S.O.V.I.N. is shown below.



JAC UBS 25 G V 8 123456

- 123456 — Sequential production serial number
- 8 — Assembly plant code
- V — Model year code: T=1996, V=1997
- G — Wheel base: D=short, G=long
- 25 — Engine code: 25=petrol, 69=diesel
- UBS — Model code
- JAC — World manufacturer identifier

Holden Identification Plate

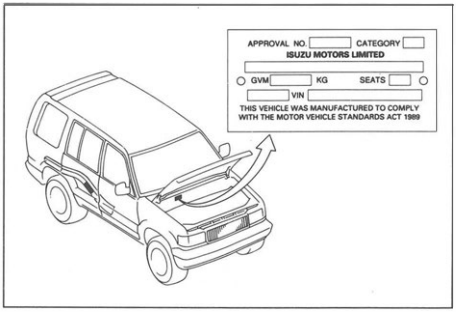
The Holden Identification Plate is located on the passenger's side of the radiator support panel.

The Holden number is used for warranty identification, Roadside assist identification etc.

IDENTIFICATION PLATES cont.

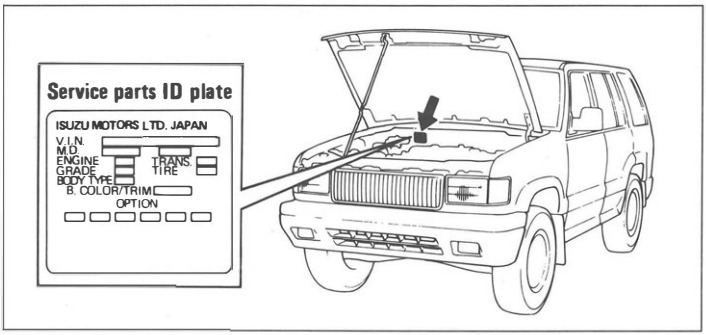
Safety compliance plate

Shown on this plate are the Approval numbers, Category, Manufacturer's Name, Model name and Model code, G.V.M. (Gross Vehicle Mass), Seating Capacity, Build date and V.I.N. (Vehicle Identification Number).



Body & option identification plate (Service parts ID plate)

The built date (shown on this plate) is defined as "the date of manufacture" by calendar month and year in which the body shell and power train sub-assemblies are co-joined or moved from the production line.



Tyre pressure placard

The tyre placard is on the driver's door lock pillar, visible when the door is open.

Emission label

The emission label is located on the under side of the bonnet.

CHAPTER 9

After sales

Page

9-2 New Vehicle Warranty
9-4 Parts and Accessories Warranty
9-5 Warranty questions & answers
9-8 HoldenWise
9-10 Roadside service
9-12 Authorised Holden Dealers
9-21 Customer assistance

Note: Dealership names and addresses may change after the printing of this Handbook. The list contains both Authorised Holden Dealers and Authorised Holden Service Operations.

NEW VEHICLE WARRANTY CERTIFICATE

New Vehicle Warranty application

This Warranty is given by Isuzu-General Motors Australia Ltd. A.C.N. 006 962 572, ("I-GM"). The Warranty applies to the vehicle identified on the inside front cover of your Owner's Handbook. It is provided to the original and subsequent owners/operaters driving the vehicle within Australia during the Warranty Period.

This warranty is given in addition to all rights conferred by law on that person.

Owners of vehicles operated outside Australia should consult their local dealer about the warranty applicable to their vehicle.

Repairs covered

Subject to the exclusions shown below, this Warranty covers the correction, during the Warranty Period, of any vehicle defect related to materials or workmanship and advised to a Holden Dealer or Authorised Service Outlet, by repair or at I-GM's option by replacement.

Warranty period

The coverage commences from the date of delivery (or in the case of a demonstrator vehicle the date when the vehicle was first placed into service by the Dealer). The coverage expires at the end of the period of 3 years after the commencement date or after the vehicle has travelled 100,000 kilometres, whichever occurs first.

No charge

Warranty work undertaken (including parts and labour) will be carried out at no cost to the vehicle owner. However, this work should not be confused with servicing specified in the Maintenance schedule in Chapter 12 of your Owner's Handbook for which a charge is payable.

NEW VEHICLE WARRANTY CERTIFICATE cont.

Warranty exclusions

- **Damage**
  Your Warranty does not extend to following causes of damage:
  Damage caused by an accident, fire, theft or moving objects striking the vehicle.
  Damage caused by industrial fallout, chemicals or sealants.
  Damage caused by atmospheric fallout or flood, hail, salt, etc.

- **Maintenance items**
  Services such as, brake adjustment, replacement of filters, wiper rubbers etc., which are required as part of normal vehicle maintenance.

- **Tyres**
  The tyres (and tubes where applicable) fitted to your vehicle are not covered by this warranty. However, they may be covered by the tyre manufacturer.

- **Batteries**
  Batteries are warranted for 12 months from the commencement date of the warranty.

- **Misuse**
  The warranty does not cover damage caused by:
  (a) misuse or abuse of the vehicle such as by racing, rallying, overloading, etc., or neglect
  (b) operation of the vehicle after the defect is known
  (c) failure to carry out proper maintenance services
  (d) use of incorrect types and grades of fuel, oil or lubricants
  (e) alteration of the vehicle by anyone not authorised by I-GM
  (f) fitting of parts or accessories not marketed by I-GM
  (g) any work carried out on the vehicle by anyone except an authorised Holden Dealer or Service Dealer.

PARTS AND ACCESSORIES WARRANTY

I-GM warrants I-GM approved Parts and Accessories ("Parts" and "Accessories") for the periods and on the conditions set out below. The Warranty covers the correction, during the relevant Warranty Period, of defects in any such Parts and Accessories, by repair or at I-GM's option by replacement.

- **Accessories installed to the new vehicle**

  I-GM approved Accessories installed by a Holden Dealer or authorised Service Outlet to the new vehicle at the time of purchase are covered together with the New Vehicle warranty for the period of 3 years or 100,000 km, whichever occurs first.

- **Parts and accessories installed after new vehicle delivery**

  Parts and Accessories installed by a Holden Dealer or authorised Service Outlet are covered by the unexpired portion of the New Vehicle warranty or the first of 2 years or 50,000 km. After expiry of the New Vehicle warranty, the Parts and Accessories warranty will apply until the expiration of 2 years or 50,000 kms (whichever comes first) from date of fitment.

- **Purchased at retail or trade**

  Parts and Accessories purchased at trade or retail and installed by other than a Holden Dealer or authorised Service Dealer are warranted for 1 year from the date of purchase. Please keep a receipt to support warranty claims.

- **Parts and accessories warranty exclusions**

  The tyres (and tubes where applicable) are not covered by this warranty. However, they may be covered by the tyre manufacturer.

  Batteries are warranted for 12 months from date of purchase.

  Parts which are required as part of normal vehicle maintenance are warranted against manufacturing defect at the time of installation.

WARRANTY QUESTIONS

This section is designed to assist you in understanding the I-GM Warranty provided with your new vehicle.

The following are some of the most frequently asked questions, for which detailed answers have been provided.

Q 1. How do I go about obtaining I-GM Warranty Service?

It is the responsibility of the Selling Dealer to provide I-GM Warranty service, therefore you should take your vehicle to the Selling Dealer whenever I-GM Warranty service is needed. However, if this is not possible, you may go to any other Authorised Holden Dealer. The details recorded inside the front cover of this handbook will be required by the Dealer.

Q 2. What should I do if my vehicle becomes unsafe or inoperative as a result of a defect which is covered by the IGM New Vehicle Warranty?

You should contact the nearest Authorised Holden Dealer or I-GM Customer Assistance Service (refer last page of this chapter) as soon as possible, and arrange for that Dealer to carry out the required I-GM Warranty Service.

Q 3. What should I do if, in an emergency, I-GM Warranty service is required and an Authorised Holden Dealer is not available to provide such service at the time?

If, in an emergency, a repair, replacement or adjustment (covered by the I-GM New Vehicle Warranty) is required to enable your vehicle to be operated safely and it is *not* practical for you to go to an Authorised Holden Dealer, the service (to the extent that it is necessary to enable your vehicle to be operated safely) may be performed by any other qualified mechanic or repairer. A claim for the reasonable cost may be made through the Authorised Holden Dealer who would normally provide you with I-GM Warranty Service. You must also take your vehicle to the Authorised Holden Dealer for inspection of the service and/or completion of any required I-GM Warranty Service, as soon as possible.

Note: During normal business hours you should seek authorisation from your nearest Authorised Holden Dealer or I-GM Customer Assistance Service, prior to repairs being commenced.

Q 4. Are damage or injury, loss of time, inconvenience, commercial or other direct or indirect loss covered by the I-GM Warranty?

No, these items are not covered. I-GM warranty only covers the repair, replacement or adjustment of those parts of your vehicle which are found to be defective in materials or workmanship. No other types of claim for compensation of any kind, even if the same resulted from a consequence of a defect in materials or workmanship in your vehicle, will be recognised under the I-GM New Vehicle Warranty.

You may have rights under the law to claim compensation outside of the I-GM New Vehicle Warranty, but any claim based on those rights should be separately pursued.

WARRANTY QUESTIONS

Q 5. Will I have to pay for maintenance costs during the Warranty Period?

Maintenance costs are not covered by the I-GM New Vehicle Warranty. Lubricants and parts used for this service will, however, be charged to the owner. This is provided that your vehicle has been operated under *normal* operating conditions (refer Chapter 12) and also that no modification (other than a modification made by, or at the direction of, I-GM) has been made to your vehicle. The Maintenance Schedules in this handbook specify the *minimum* maintenance required for your vehicle operating under normal conditions.

The Maintenance items (except where they are required as a result of defects in materials or workmanship) for which you will have to pay for include:

- Clutch facings
- Engine tune-up, including spark plugs replacement.
- Replacement of all filters.
- Cleaning or flushing of fuel, coolant, brake, engine, transmission, differential, power steering etc., after 5,000 km.
- Adding to (or replacing) lubricants.
- Adding to (or replacing) air conditioning refrigerant, after 5,000 km.
- Any necessary adjustments to drive belts, transmissions, clutch, park brake etc.
- Wheel balancing - after 5,000 km.
- Wheel alignment.
- De-dusting or de-glazing of brake linings or pads - after 5,000 km.
- Brake lining wear or damage.
- Brake disc pad or disc wear.
- Battery re-charging.
- Paint, bright metal finish and trim, due to normal deterioration.
- Body panel adjustment - after 5,000 km.
- Door, or bonnet lock adjustments.
- Glass or channel adjustments - after 5,000 km.
- Body rattle, squeaks and general tightening of bolts, fastenings and fittings - after 5,000 km.
- Chipped glass or breakage.
- Torn or damaged floor mats or carpets.

Q 6. Are my tyres covered by the I-GM New Vehicle Warranty?

No. The tyres fitted to your vehicle are covered by a separate warranty provided by the tyre manufacturer. Any Authorised Holden Dealer will assist you by discussing any queries which you might have with respect to the tyre manufacturer's warranty with the tyre manufacturer's representative.

WARRANTY QUESTIONS

Q 7. Are I-GM parts and accessories covered by warranties?

If you buy an I-GM part or accessory from an Authorised Holden Dealer it will be warranted by that Dealer, under the I-GM parts and accessories Warranty, against defects in materials or workmanship for 12 months, from the date of purchase. In the case of an I-GM part or accessory which has been installed in a vehicle by a Holden Dealer, it will be warranted for 24 months or 50,000 km (whichever occurs first) from the date of installation.

Defects in tyres (these being warranted by their manufacturers), batteries (which are covered for 12 months) and maintenance items such as filters, spark plugs, wiper blades and brake pads/linings require replacement as part of normal maintenance. Such replacements are not the subject of this warranty.

Q 8. Will I have to pay for any costs or expenses in connection with the provision of I-GM Warranty service?

All parts and labour used in carrying out I-GM Warranty Service at the premises of the Servicing Dealer are free of charge. Whenever I-GM Warranty service is to be carried out by the Servicing Dealer it is your responsibility to deliver your vehicle to the Servicing Dealer's premises.

If, as a result of a defect which is covered by the I-GM New Vehicle Warranty, your vehicle cannot be driven safely and you arrange for the nearest Authorised Holden Dealer to carry out the required I-GM Warranty Service, I-GM will accept reasonable towing costs to move your vehicle to the nearest Holden Dealer's premises. Before employing a towing company, contact the nearest Holden Dealer and/or I-GM Customer Assistance Service (refer last page of this chapter) to obtain guidance.

Q 9. Would my vehicle's engine benefit from fuel additives, oil additives or coolant additives not marketed by I-GM ?

The use of break-in oil, tune-up compounds, friction-reducing compounds and other supplemental additives is not recommended; their use will not only increase operating costs, but may also be detrimental to the operation of your vehicle.

Only the fluids and lubricants referred to in this handbook should be used.

HOLDENWISE

Holden, a lot more than just a vehicle

As you'll soon discover, your new Holden is a lot more than just a vehicle..... because every Holden comes with one very special feature, HoldenWise.

HoldenWise was created to offer Holden owners the best Australia wide customer care system possible. To do this we've drawn on all the technical resources and service skills of I-GM. However, the key to our service is and always will be, people, with over 5,000 Holden service and parts specialists spread across the country. Thanks to them, we can offer HoldenWise Customer care at participating Holden Dealers with complete confidence.

Holden Specialists

HoldenWise technicians have been specially trained by the factory and have the experience in service and parts skills necessary to work on your vehicle. As you can imagine Holdens today are a lot more sophisticated than they used to be, which means specialist service is essential.

Knowing Holdens so well, our technicians know exactly how long each service takes, which is why Holden dealers can offer fixed price servicing.

HoldenWise Fixed Price Servicing

HoldenWise has eliminated one of the big worries about vehicle services, not knowing what the bill will be. Every participating Dealer service centre offers fixed price servicing. You need only ask and you'll be given a quote on how much the job will cost before it's started. So there are no nasty surprises when paying the bill.

Of course, if during the service, a problem is discovered, you'll be telephoned immediately before any more work is done.

You may be comforted to know that all participating Dealer work is covered by a workmanship warranty.

HoldenWise Workmanship Warranty

All services and repairs are covered by a 6 month/10,000 km Dealer warranty on workmanship. If a fault arises during that period, due to the service, your Holden Dealer will fix it. But workmanship isn't the only thing that is guaranteed.

HOLDENWISE

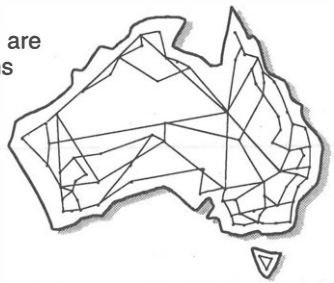
I-GM Parts Warranty

The parts used in HoldenWise services are manufactured and tested to the same high standards as the originals, so I-GM quality parts carry the same 24 month/ 50,000 km warranty when fitted by the Dealer. Naturally the warranty does not apply to normal maintenance parts like oil filters and spark plugs.

The HoldenWise Network

Most HoldenWise Dealer service and parts centres are computer linked through to the factory, which means you'll never have to wait an eternity for the right parts to be found.

What's more, with around 350 Dealers nationwide, you'll never be far from the same high standard of service.



I-GM Accessories

I-GM accessories are designed and approved as an integral part of your vehicle so you know they will fit and function precisely. When installed by the Holden Dealer to your new vehicle, I-GM accessories are covered by the I-GM warranty of 24 months or 50,000 km for your added protection.

Customer Assistance

Finally, we suggest you read the last page of this chapter for information on I-GM Customer Assistance Service.

UNAUTHORISED STATEMENTS IN RELATION TO HOLDEN'S PRODUCTS

No Holden Dealer or other person is authorised or permitted to give or make any statement assertion or undertaking in relation to the quality, performance, characteristics, descriptions or fitness for any purpose of any I-GM product or in connection with the supply of any I-GM product, which is at variance with any written statement assertion or undertaking on any of these subjects given or made by I-GM in its published sales literature, and the Company does not accept any such unauthorised action.

HOLDENWISE ROADSIDE SERVICE

3 YEAR / 24 HOUR ROADSIDE SERVICE

Our commitment to your satisfaction

HoldenWise Roadside Service is part of the unequalled commitment of Holden to provide total motoring satisfaction.

From the moment delivery is made, our aim is to provide the finest possible ownership experience, from design through manufacturing to servicing, and now beyond to the open road.

HoldenWise Roadside Service is your key to worry free motoring - one that covers you from your driveway to the open road, Australia-wide.

We hope the need never arises, but if it does, we'll be there to help through HoldenWise Roadside Service.

How does Holdenwise Roadside service work?

When you decide to buy a new Holden, you will have made a wise purchase decision and you will become a member of an exclusive club of Holden owners, covered by a 24 hour a day, 365 day a year, professional service for 3 years.

HoldenWise Roadside Service is provided by General Motors-Holden's Automotive Ltd., and delivered by the collective resources of the Australian Automobile Clubs and Associations (the constituents of the Australian Automobile Association) the 'AAA'.

Which cars are covered by the service?

As of 1st November 1993 all new Holden passenger and light commercial vehicles are covered for 36 months service.

HoldenWise Roadside Service is extended to private and business cars, taxis, rental companies, all government and fleet operators.

What will Holdenwise roadside service do for me?

HoldenWise Roadside Service is designed to get you mobile after your vehicle has become disabled on a constructed road that is trafficable to normal two wheel drive vehicles.

Your vehicle must be disabled due to (non-collision related) mechanical failure/ driver fault i.e. flat tyre, flat battery, locked out of the vehicle, or have simply run out of petrol.

Where permanent repairs are either not possible or practicable, temporary repairs will be carried out, or the vehicle towed to a Holden Dealer or approved repairer.

When do the benefits begin?

Cover begins the moment a Holden vehicle is purchased. An Interim Registration card entitles you to immediately receive all the benefits of HoldenWise Roadside Service.

Where can I get HoldenWise roadside service?

The professional service of HoldenWise Roadside Service is available to you at home, or at the roadside, anywhere in Australia, should you need it.

HOLDENWISE ROADSIDE SERVICE

What happens if my vehicle needs major repairs?

In the case of a breakdown where the vehicle cannot be made driveable or where temporary repairs may void the warranty, HoldenWise Roadside Service will provide towing to the nearest Holden Dealer, or if not geographically practicable, to the local 'AAA' constituent service facility. It is the responsibility of the owner to seek Holden's approval before any repairs are undertaken by a non Holden Dealership. This action will ensure the warranty remains valid.

During an after-hours' breakdown and where the metropolitan Holden Dealer or 'AAA' constituent's approved repairer is not open, the vehicle may be towed to any other location nominated by the driver not exceeding 20 kilometres from the point of breakdown.

Is there any membership or joining fee?

No, you will not be required to pay any fees. Every new Holden passenger car and light commercial vehicle owner is eligible for HoldenWise Roadside Service for 36 months.

What will HoldenWise roadside service cost me?

Materials, fuel and spare parts supplied during the service must be paid for at the time of the service. The service personnel attending will issue a receipt for these expenses. Reimbursement of expenses covered by Holden warranty can be claimed by contacting the local Holden Dealer.

What happens if I sell my vehicle?

Holdenwise Roadside Service stays with the vehicle, so if you sell your vehicle during the 36 month period, it is still eligible for the service. The new owner simply registers for the service by using the change of ownership form supplied in the member's kit.

Roadside 'ULTRA' - Prestige cars

Some Holden luxury models receive the additional cover of 'Roadside Ultra'. This additional cover provides the new owner with all the benefits of HoldenWise Roadside Service along with some very valuable extras, including accommodation, alternative transportation, rental car and Australia-wide vehicle recovery.

HSV - Holden Special vehicles

Purchasers of Holden Special Vehicles automatically qualify for the coveted HSV Gold Lion package. This package provides the Gold Lion Member with all the benefits of HoldenWise Roadside Service and where applicable, the enhancement package 'Roadside Ultra'.

How do I call for service?

Simply call **1800 817 100**, the HoldenWise toll free number from anywhere in Australia.

The HoldenWise Roadside Service Kit contains full details of the service and any limitations that may apply. In the meantime further information is available from the toll free Holden and Isuzu Customer Assistance Service line, on **1800 033 349**.

HOLDEN DEALERS

N.S.W. Metropolitan

ARNCLIFFE	Suttons Motors Arncliffe P/L - 93 Princes Highway
ASHFIELD	Muirs Holden - 252 Parramatta Road
BALGOWLAH	James Langfield Holden - 164 Condamine Street
BANKSTOWN	Princeton Holden - 466 Chapel Road
BLACKTOWN	West City Holden - 120~128 Sunnyholt Road
CABRAMATTA	John Abrahams Holden - 266~284 Hume Highway
CAMPBELLTOWN	Paul Wakeling Holden - Cnr Blaxland & Campbelltown Rds
CASTLE HILL	Windsor Road Holden - Cnr Victoria Ave/Windsor Rd
CHATSWOOD	Sundell Holden - Cnr Smith & Gibbes Street
CHULLORA	Suttons Motors (Chullora) P/L - Cnr Hume Hwy/Waterloo Rd
DEE WHY	Peninsula Holden - Cnr May & Mooramba Roads
GORDON	Sundell Holden - Cnr Pacific Hwy/McIntyre St
HOMEBUSH	Suttons Motors Homebush P/L - 112 Parramatta Road
LAKEMBA	Glen Fulton Holden Lakemba - 817 Canterbury Road
LIVERPOOL	A.C. McGrath & Co Pty Ltd - 411~419 Hume Highway
NEWPORT	Newport Car Care Centre - 340 Barrenjoey Road
PARRAMATTA	Boyded Holden Parramatta - 65 Church Street
PENNANT HILLS	Barry Smith Holden - 351~355 Pennant Hills Road
PENRITH	John Young Holden - 39~47 Henry Street
ROCKDALE	Peter Terry Holden - 571 Princes Hwy
ROSEBERY	Suttons City Holden - Link Road
RYDE	Hunter Holden - 603~605 Victoria Road
SPRINGWOOD	Springwood Holden - 15 Ferguson Road
ST LEONARDS	New Hunter Holden - 4 Herbert Street
ST. MARY'S	John Young Holden - Cnr Glossop & Harris Streets
SUTHERLAND	Greg Ball Holden - 499~505 Princes Highway
WAITARA	Suttons Motors Waitara P/L - 90 Pacific Hwy
WINDSOR	Hawkesbury Valley Holden - 18 Macquarie Street

N.S.W. Country

ALBURY	McRae White Holden - 647~657 Dean Street
ARMIDALE	New State Motors - 103 Rusden Street
BALLINA	Quayside Motors - Pacific Highway
BARHAM	Hall's Motors Pty Ltd - 44 Noorong Street
BATEMAN'S BAY	Surfair Holden - 30-32 Orient Street
BATHURST	Bathurst Motors Pty Ltd - 54 Durham Street
BEGA	South Coast Holden - Cnr Upper and Gibbs Sts
BELMONT	Challenge Holden - 444 Pacific Highway
BLAYNEY	Alan May Auto. Services - 98 Adelaide Street
BOMBALA	Delcott Engineering Pty Ltd - Maybe Street
BOOROWA	Boowowa Auto Repairs - 40 Marsden Street
BOURKE	Bourke Smash Repairs - 12 Richard Street
BREWARRINA	Lukas Holden - Bathurst Street
BROKEN HILL	Donlee Motors Pty Ltd - Cnr Galena & Rakow Streets
CAMDEN	Paul Wakeling Pty Ltd - 15 Cawdor Road
CANOWINDRA	Canowindra Motors - Gaskill Street
CARDIFF	Brian Kelly Holden - 35~39 MacQuarie Road

HOLDEN DEALERS

CASINO	Casino Holden - 142 Barker Street
CESSNOCK	Geoff Boyd Holden - Cnr Wollombi Road and Darwin Street
COFF'S HARBOUR	Geoff King Holden - Cnr Pacific Hwy and Thompson Road
COOLAMON	Coolamon Motors - Cowabbie Street
COOMA	Summit Holden - 66~70 Sharp Street
COONABARABRAN	Allan Cooper Holden - John Street
COONAMBLE	Moody's Motors - 37 Aberford Street
COOTAMUNDRA	Jenkins Garage - 111 Wallendoon Street
COWRA	Waugoola Motors Pty Ltd - Kendal Street
CROOKWELL	Crookwell Autos - 114 Goulburn Street
DENILIQUIN	Burchfield Bros & Co - 112~114 End Street
DORRIGO	Phil Noble Motors - 46~48 Hickory Street
DUBBO	John Kierath - 54 Bourke Street
DUNGOG	Turner Holden - 248 Dowling Street
EDEN	Ron Doyle - 113 Imlay Street
FINLEY	Riverina Garage Finley - 104 Murray Street
FORBES	Paddison & Co - Cnr Rankin St & Court Lane
GILGANDRA	Gilgandra Holden - 3 Morris Street
GLEN INNES	Glen Severn Holden - 167 Grey Street
GLOUCESTER	Grahame's Garage Pty Ltd - 1 Park Street
GOSFORD	Noble Holden - Pacific Highway
GOULBURN	Geissler Motors - 279~298 Auburn Street
GRAFTON	Ken Casson Holden - 37~39 Turf Street
GRENFELL	Terry Carroll Motors Pty Ltd - 40 Alexandra Street
GRIFFITH	Leo Franco Holden - 164~166 Yambil Street
GUNNEDAH	Namoi Valley Motors - 48 Barber Street
GUYRA	Burgess Garage Pty Ltd - 131~143 Bradley Street
HARDEN	Ginty & O'Leary - Cnr Station & Albury Streets
HAY	Royce Curtis Motors - 168 Lachlan Street
HOLBROOK	Lieschke Motors Pty Ltd - Albury Street
INVERELL	Gaukroger Sales Pty Ltd - Vivian Street
JERILDERIE	Jerilderie Motors - Jerilderie Street
KANDOS	Chrisfield Holden - 11 Angus Street
KATOOMBA	Katoomba Holden - 136 Great Western Highway
KEMPSEY	Thoroughgood Motors - 118~132 Belgrave Street
KIAMA	Glen Fulton Holden - 35~41 Collins Street
KYOGLE	O & H Holden - 128~134 Summerland Way
LEETON	John Ryan Holden - 47 Pine Street
LISMORE	John Chant Motors Pty Ltd - 21~27 Carrington Street
LITHGOW	Lithgow City Holden - 255 Main Street
MACKSVILLE	Eastland Auto Centre - 18~22 Cooper Street
MACLEAN	O'Halloran Motors - 175 River Street
MAITLAND	Heritage Holden - 557~567 High Street
MOREE	Keith Haddad Holden - Cnr Boston & Heber Streets
MORUYA	Surfair Holden - 88 Vulcan Street
MOSS VALE	Vagg & Partners Holden - 160~162 Argyle Street
MULLUMBIMBY	Tony Carsburg Holden - 2 Argyle Street
MUDGEE	Ross Granata Motors - 47~55 Market Street
MURWILLUMBAH	Tweed Motors Murwillumbah - 29 Prospero Street
MUSWELLBROOK	Upper Hunter Motors Pty Ltd - 116 Bridge Street

HOLDEN DEALERS

NAMBUCCA HEADS	Nambucca Holden - Mann Street
NARRABRI	Allan Cooper Holden - 181 Maitland Street
NARROMINE	L.E. Stanley Pty Ltd - Dandaloo Street
NEWCASTLE	Newcastle City Holden - 745 Hunter Street
NOWRA	Glendon Motors Holden - 301~313 Princes Highway
ORANGE	Canobolas Holden - 348 Summer Street
PARKES	Go Motors of Parkes - Cnr Mitchell & Clarinda Sts
PEAK HILL	S.Leary & Sons Pty Ltd - Mingelo Street
PORT MACQUARIE	Todd Holden - 16~20 Clarence Street
QUIRINDI	Browning Motors - 82 Henry Street
SCONE	Upper Hunter Motors (Scone) - 100 Liverpool Street
SINGLETON	Lancaster Holden - 80 John Street
TAMWORTH	Kensell's Holden - Cnr Bourke St & Kable Ave
TAREE	Hardes Auto House - Beeton Parade
TEMORA	Rod Lovering Holden - 2 Stockinbingal Road
TENTERFIELD	Sexton & Green (Sales & Service) P/L - 148 Rouse Street
TUNCURRY	Great Lakes Holden - 144 Manning Street
TUMUT	Nancarrow Holden - 35 Fitzroy Street
TWEED HEADS	Tweed Motors Pty Ltd - 75~79 Pacific Highway
ULLADULLA	Alan May Holden - 150 Princes Highway
WAGGA WAGGA	Wagga Motors Pty Ltd - 32 Dobney Avenue
WALCHA	Bowden's Garage Pty Ltd - Derby Street
WALGETT	Walgett Garage Pty Ltd - 81 Wee Waa Street
WALLA WALLA	D.E. Lieschke & Son Pty Ltd - Commercial Street
WARIALDA	Roger Moore - Hope Street
WARILLA	Wilson's Holden - 29 Shellharbour Road
WARREN	Fuller Bros - Dubbo Street
WEE WAA	Allan Cooper Holden - Rose Street
WELLINGTON	Gersbach's Garage Pty Ltd - 92 Lee Street
WEST WYALONG	West Wyalong Motors - 183 Main Street
WOLLONGONG	Dwyers City Holden - 31~33 Crown Street
WYONG	Barry Robertson Holden - 172 Pacific Highway
YASS	Bill Nesbitt Holden - 221 Comur Street
YOUNG	Harden & Geelan Holden - 48 Boorowa Street

A.C.T.

BELCONNEN	Gerald Slaven Holden - Josephson Street
BRADDON	Rolfe Holden - 44 Mort Street
PHILLIP	Commonwealth Motors Pty Ltd - 158 Melrose Drive

Tas.

BURNIE	Motors Burnie - Marine Terrace
DEVONPORT	Motors Devonport - Victoria Parade
HOBART	Motors Pty Ltd - 179 MacQuarie Street
KING ISLAND	King Island Motors Pty Ltd - Netherby Road, Currie
LAUNCESTON	Motors Launceston - 93~95 Elizabeth Street
SMITHTON	Motors Smithton - Cnr Nelson & Gibson Street
ULVERSTONE	Motors Ulverston - 97~101 Reibey Street

HOLDEN DEALERS

Vic. Metropolitan

BERWICK	Barry Bourke Holden - 755 Princes Highway
BUNDOORA	Watson Holden - 413 Grimshaw Street
BURWOOD	Penfold Holden - 63 Burwood Highway
CAULFIELD	Booran Holden - 1049 Glenhuntly Road
CHELSEA	Harrison Holden - 370 Nepean Highway
CHELTENHAM	Booran Holden - 1212 Nepean Highway
DANDENONG	Booran Holden Dandenong- 25 Lonsdale Street
DONCASTER	Doncaster Holden - 636~640 Doncaster Road
ELSTERNWICK	Reg Hunt Holden - 77 Nepean Highway
ESSENDON	Preston Motors (Essendon) P/L - 205~211 Keilor Road
FAWKNER	Mantello Holden - 1263 Sydney Road
FERNTREE GULLY	Neilson Holden F.T.G. - 980 Burwood Highway
FOOTSCRAY	Alan Mance Holden - 435 Barkly Street
FRANKSTON	Noel Gould Holden - 140 Dandenong Road
GEELONG	R & B Smith Holden - 510 Moorabool Street
GEELONG	Winter & Taylor (Sales) P/L - 23 Cavendish Street
GLEN WAVERLEY	Geoff Brady Holden - 565~577 Springvale Road
HASTINGS	Westernport Holden - 2147 Flinders Road
LILYDALE	Noel Dight Holden - 344 Main Street
MORNINGTON	John Collins Holden - 976 Nepean Highway
OAKLEIGH	Garry & Warren Smith - 1575 Dandenong Road
PRESTON	Ralph D'Silva Holden - 573~603 High Street
RINGWOOD	Patterson Cheney Holden - 45~57 Maroondah Highway
SOUTH MELBOURNE	Patterson Cheney Holden - 168 Sturt Street
SOUTH YARRA	Penfold Holden - 681 Chapel Street
SUNSHINE	Kevin Dennis Holden - 272 Ballarat Road
WERRIBEE	Ballan Holden - 56 Princes Highway
WEST MELBOURNE	Reg Hunt Holden - 577 King Street

Vic. Country

ALEXANDRA	GK & JH Radford - 79 Greints Street
ARARAT	David Reid Motors - High Street
BAIRNSDALE	The Big Garage - 199 Main Street
BALLARAT	Peter Amor Motors - 209~211 Gillies Street
BENALLA	Arnott's Motors - 88~90 Bridge Street
BENDIGO	Ron Poyser Holden - Cnr High & Myrtle Streets
BIRCHIP	R.L. & C.J. Bales - 38 Cumming Avenue
BOORT	Jaron Motors - 55 Godfrey Street
CAMPERDOWN	Camperdown Auto Parts - 96 Manifold Street
CASTERTON	Coxons Holden - 139 Henty Street
CHARLTON	K.V. Charlton - 70 High Street
COBRAM	Neville Mustica Motors - Murray Valley Hwy
COHUNA	Hare Motors Holden - 105~107 King George Street
COLAC	Parker Bros. Motor Co - 224 Murray Street
DAYLESFORD	K.R. Little - Vincent Street
DIMBOOLA	Westerfield Motors Pty Ltd - 64 Lloyd Street
DONALD	O.A. Shilton & Sons Pty Ltd - 5 Wood Street

HOLDEN DEALERS

ECHUCA	Echuca Motors - 1 Nothern Highway
EUROA	Croxford Holden - 41 Clifton Street
FOSTER	Ray Dower Motors - 78 Main Street
HAMILTON	Peter Sandow Motors Pty Ltd - 261 Gray Street
HOPETOUN	Hopetoun Motors - 78 Lascelles Street
HORSHAM	Ivan Morrow Motors Pty Ltd - 22 O'Callaghans Street
KANIVA	Kaniva Motors - 82 Commercial Street
KOOWEERUP	G & J Light Mechanical repairs P/L - Station Road
KORUMBURRA	Peter Dunlevie Holden - 42 Commercial Street
KUNUNURRA	Elgee Holden - 231 Bloodwood Drive
KYABRAM	D'Alberto Holden - 60 McEwen Road
KYNETON	Mollison Motors Pty Ltd - 167 Mollison Street
LEONGATHA	Gleeson Holden - 37~43 Bair Street
MAFFRA	Maffra Holden - Johnson Street
MANSFIELD	Martin's Garage - 52~54 Chenery Street
MARYBOROUGH	Graham Jacka Holden - 35 Nolan Street
MILDURA	Stuart & Harrison (Sales) Pty Ltd - 24~32 Deakin Avenue
MORTLAKE	W. Christian (Mortlake) Pty Ltd - 107 Dunlop Street
MURRAYVILLE	Peers Motors - McKenzie Street
NATHALIA	BHB Motors - 6 Blake Street
NHILL	Ivan Morrow Motors Pty Ltd - 71~73 Nelson Street
NULLAWIL	Nullawil Motors & General Engineers - Calder Highway
ORBOST	Merlin Motors - Stanley Street
PORTLAND	Reynolds Holden - Henty Highway
QUAMBATOOK	Quambatook Auto Services - 32 Gutherie Street
ROCHESTER	Bruce Hocking Motors Pty Ltd - 71 Moore Street
ROBINVALE	Stuart & Harrison (Sales) Pty Ltd - cnr Herbert & George Sts
RUTHERGLEN	Jasper Bros Pty Ltd - 62 Main Street
SALE	Keith Boyd Holden - 273 York Street
SEALAKE	Paddy Smith Holden - Calder Highway
SEYMOUR	Neil Beer Holden - 49 Emily Street
SHEPPARTON	Parker Bros. Auto Co. - Benalla Road
STAWELL	Tonkin Motors - 71~73 Main Road
SWAN HILL	Swan Hill Holden - 94~102 Campbell Street
TALLANGATTA	Crispin Motors - 21 Towong Street
TIMBOON	Timboon Motors - Bailey Street
TRARALGON	Colin Watson Holden - Princes Highway
UNDERBOOL	A.J. Gloster & Sons - Cotter Street
WANGARATTA	Alan Capp (New Cars) Pty Ltd - Tone Road
WARRACKNABEAL	Amor Motors Aubrey Truck Sales - 33 Woolcock Street
WARRAGUL	Vin Rowe Holden - 3 Endeavour Street
WARRNAMBOOL	Callaghan Motors Pty Ltd - 133~137 Fairy Street
WONTHAGGI	J.P. Holden - 2 Murray Street
YARRAM	John Palmer Holden - 150 Commercial Road
YARRAWONGA	Pigdons Pty Ltd - Belmore Street

HOLDEN DEALERS

Qld. Metropolitan

ALBION	Bill Harrison Car Sales - Frodsham Street & Crosby Road
ASPLEY	Zupps Aspley Pty Ltd - 1454 Gympie Road
CAPALABA	Oldfield Holden - 103 Redland Bay Road
INDOOROOPILLY	Westpoint Holden - 440 Moggill Road
IPSWICH	Ross Llewellyn Holden - 246 Brisbane Road
MOOROOKA	John Sivyer Holden - 1060 Ipswich Road
MT. GRAVATT	Zupps Motors Pty Ltd - 1310 Logan Road
NEWSTEAD	Eagers Retail Pty Ltd - 95 Breakfast Creek Road
PETRIE	Petrie Holden - 1059 Gympie Road
REDCLIFFE	Village Holden - 425 Elizabeth Avenue
SPRINGWOOD	Motorama Holden - 3455 Pacific Highway
WINDSOR	Leach Holden - 143 Newmarket Road
WOOLLOONGABBA	Armstrong Holden - 73 Ipswich Road
WYNNUM	Doug Barton Holden - 200 Tingal Road

Qld. Country

ATHERTON	Redding Motors Pty Ltd - 2 Cook Street
AYR	Honeycombes Sales & Service - 213~217 Queen Street
BEAUDESERT	Lawson Holden - 57 Brisbane Street
BOWEN	McDermott Holden - 98 Herbert Street
BUNDABERG	Ross Gray Holden - Takalvan Street
CABOOLTURE	Beecham Holden - Bribie Island Road
CAIRNS	Ireland Holden - 227~233 Mulgrave Road
CALOUNDRA	Caloundra City Holden - Caloundra Road
CHARLEVILLE	Alan Dobbin Holden - 129 Alfred Street
CHARTERS TOWERS	Peters Holden - 57 Mosman Street
CHINCHILLA	Ainsworth Motors & Machinery Pty Ltd - 55 Chinchilla Street
CLONCURRY	Cloncurry Motors - 59 Scarr Street
CROWS NEST	Dennis Nissen Motors - 14 William Street
DALBY	Johnson's Holden - 36 Drayton Street
EMERALD	Orion Agriculture Supplies Pty Ltd - Clermont Street
GATTON	Gatton Auto Centre - 67 Railway Street
GLADSTONE	Andersons Auto City - 56 Yarroon Street
GYMPIE	Madills - 35 Mellor Street
INGHAM	Devietti Holden - 99 Lannercost Street
INNISFAIL	I.C. Taylor Pty Ltd - 117 Edith Street
JULIA CREEK	Julia Creek Motors Pty Ltd - Burke Street
KILCOY	Hobart's Garage - 58 Mary Street
KINGAROY	John Dundas Pty Ltd - 38 King Street
LAIDLEY	Buhse's Garage Pty Ltd - 5 Spicer Street
LONGREACH	Longreach Motors - 33 Swan Street
MACKAY	Pioneer Holden - Cnr Gordon & Wellington Streets
MAROOCHYDORE	Sunco Holden - Wises Road
MARYBOROUGH	Whitaker Holden - 109~111 March Street
MOUNT ISA	Barkly Motors Pty Ltd - Marian Street
MURGON	Clifton Motors - McAllister Street
NAMBOUR	Kallenbach Motors - 139 Howard Street

HOLDEN DEALERS

NANANGO	Nanango Motors Pty Ltd - 72~74 Drayton Street
NOOSAVILLE	Madill's Noosa - Cnr Weyba Road and Mary Street
PROSERPINE	Crossley Car Sales Whitsunday Pty Ltd - 162~164 Main St
QUILPIE	Quality Motors - Boonkai Street
ROCKHAMPTON	Lawrence's - 327 Richardson Road
ROMA	Maranoa Multi Agencies - Bowen Street
SOUTHPORT	Lockhart Holden - Cnr Nerang Road & Olsen Avenue
SPRINGSURE	Springsure Motors - Eclipse Street
ST. GEORGE	Halpin Motors - 39~41 Grey Street
STANTHORPE	Central Motors - 42 Maryland Street
TOOWOOMBA	Toowoomba Holden - Cnr James & Hume Streets
TOWNSVILLE	Tony Ireland Holden - 87~91 Charters Towers Road
TULLY	Island Coast Holden - 12 Richardson Street
WARWICK	Deighton Motors Pty Ltd - Grafton Street

N.T.

ALICE SPRINGS	Kittle Holden - Cnr Wills & Railway Terrace
DARWIN	Kerry Holden - 21~25 Stuart Highway
KATHERINE	Master Motors - 3 Second Street

HOLDEN DEALERS

S.A. Metropolitan

ADELAIDE	City Holden - 223 Grenfell Street
ELIZABETH	Peter Page Holden - Elizabeth Way
MALVERN	Claridge Holden - 361~367 Unley Road
PORT ADELAIDE	Smiths of Port Adelaide - 271 Commercial Road
REYNELLA	Southgate Holden - 49~59 Main South Road
SOMERTON PARK	Hamilton Holden - 278~288 Brighton Road
THEBARTON	Metro Holden - 1 Port Road
VALLEY VIEW	Plaza Holden - 817~839 North East Road

S.A. Country

BALAKLAVA	Balaklava Motors - 4 Wallace Street
BERRI	Rosenthal Bros Pty Ltd - Vaughan Terrace
CEDUNA	Beck Motors Pty Ltd - Poynton Street
CLARE	Brian Holmes Holden - 7 Old North Road
CLEVE	Herbert Motors Pty Ltd - Rudall Road
CUMMINS	Trigg & Wedd - 3 Umlauf Street
CRYSTAL BROOK	Crouch Rural Pty. Ltd - 26 Brandis Street
GAWLER	Steinborner Holden - Cnr Murray & Bridge Sts
KADINA	J.H. Rosewarne Pty Ltd - Graves Street
KEITH	Farmers Centre - McBain Street
KINGSCOTE	Roberts Motors - Telegraph Road
KINGSTON	Lecornu's Service Garage - Agnes Street
LOXTON	Flight Motors Pty Ltd - Bookpurnong Terrace
MAITLAND	Maitland Motors Pty Ltd - 58 Robert Street
MALLALA	Curnow's Garage Pty Ltd - Balaklava Road
MENINGIE	Peter Hood Holden - Cnr Princes Highway & Coonalpyn Rd
MILLICENT	Dennis Cowling Holden - 98 George Street
MT. BARKER	Gilbert Motors - 57 Adelaide Road
MT. GAMBIER	O.G. Roberts & Co - Jubilee Highway West
MURRAY BRIDGE	Dutton Motors Pty Ltd - 7 Adelaide Road
NARACOORTE	Kingcraig Motors Pty Ltd - 158~164 Smith Street
OLYMPIC DAM	Lavrick Engineering - Olympic Way
PORT AUGUSTA	Ken Feltus Holden - 38 Stirling Road
PORT LINCOLN	City Motors - King Street
PORT PIRIE	Spencer Holden - 50 Ellen Street
RENMARK	Rosenthal Motors Pty Ltd - Ral Ral Avenue
STRATHALBYN	Gilbert Holden Strathalbyn - High Street
TANUNDA	Hage & Co Pty Ltd - 50 Murray Street
VICTOR HARBOR	Southern Motors Holden - 5 Victoria Street
WAIKERIE	Riverside Holden - 6 Crush Terrace
WHYALLA	Ken Feltus Holden Whyalla - 74 Essington Lewis Avenue
YANKALILLA	Martin Motors Pty Ltd - Main Street
YORKETOWN	Southway Holden - 7 Minalaton Road

HOLDEN DEALERS

W.A. Metropolitan

CANNINGTON	Brian Gardner Holden - 1308~1324 Albany Hwy
FREMANTLE	Shacks Holden - 64 Queen Victoria Street
GOSNELLS	Lance Gibbons Holden - 2325 Albany Highway
MANDURAH	Mandurah Holden - 283 Pinjarra Rd
MELVILLE	Melville Motors Pty Ltd - 532~540 Canning Highway
MIDLAND	Goldy Holden - 161 Great Eastern Highway
MORLEY	Metro Motors - 212 Walter Road
NAVAL BASE	Shacks Cockburn - 15 Rockingham Road
OSBORNE PARK	North City Holden - Cnr Scarborough Beach Rd & Harborne St
PERTH	City Motors - 505 Newcastle Street
VICTORIA PARK	Youngs Holden - 529 Albany Highway
WANNEROO	Phoenix Holden - 5 Berriman Drive

W.A. Country

ALBANY	Manley Stanwell Holden - 92~98 Earl Street
BRIDGETOWN	Kordics Bridgetown - Hampton Street
BROOKTON	Coote Motors - Robinson Road
BROOME	Norwest Holden - McPherson Street
BUNBURY	Bunbury Holden - 3 Sandridge Road
BUSSELTON	Fennessy Holden - 2~4 Bussell Hwy
CARNAMAH	T & H Walton Stores Pty Ltd - Robertson Street
CARNARVON	North West Autos - 175 Robinson Street
COLLIE	Station Motors - 102 Throssell Street
CORRIGIN	Farmpower - Kunjin Road
CRANBROOK	Cranbrook Motors - 11~13 Gathorne Street
DALWALLINU	Reid & Inglis - Johnson Street
ESPERANCE	Dempster Holden - Norseman Road
GERALDTON	Youngs Motors - Cathedral Avenue
GNOWANGERUP	G.S. Hendry & Co Pty Ltd - Yougenup Street
HARVEY	Stockman Holden - 111 Uduc Road
KALGOORLIE	Kyle Motors - 114 Boulder Road
KARRATHA	Intown Autos - 1 Harwood Way
KATANNING	Edwards Holden - 159 Clive Street
KELLERBERRIN	Dowding Motors - 1 Mitchell Street
MANJIMUP	Manjimup Automotive Services - Pritchard Street
MERREDIN	Carson's of Merredin - 112 Barrack Street
MOORA	Frank Lewis Holden - Gardiner Street
NAREMBEEN	Aquip Machinery - 20 Churchill Avenue
NARROGIN	Marley White & Co - Federal Street
NEWMAN	Cockburn Corefleet - Newman Drive
NORTHAM	Withnell Motors - 58 Fitzgerald Street
TOM PRICE	A.K. Autos - 40 Booneroo Road
WAGIN	Marley White & Co - Tudor Street
WEDGEFIELD	N & L Mechnical - Lot 3780 Carlinde Street
WONGAN HILLS	Agro Machinery Pty Ltd - Fenton Street
WYALKATCHEM	Agro Machinery - Railway Terrace

CUSTOMER ASSISTANCE

We want you to be happy with your new vehicle, together with the people you deal with while you have the vehicle.

Normally, any problems with the sales, operation or servicing of your vehicle will be handled by your Dealer's Sales and Service Department.

We realize however, that, with the best intentions, misunderstandings do occur sometimes.

Therefore, we suggest you discuss any concern with one of the Dealer's management people. If you haven't received satisfaction from the Sales Manager or Service Manager - go to the General Manager or to the Dealer himself.

By now you should have satisfaction. If not, the I-GM Customer Assistance office is at your disposal.

The Holden and Isuzu Customer Assistance representatives can be telephoned from anywhere within Australia for only the cost of a local call. The Melbourne area number is 9646 5466. Outside the Melbourne Metropolitan area, the number is 1800 033 349.

If your concern relates to parts/accessories and you have made contact with the Dealer or Distributor without satisfaction, you may contact Holden's Service Parts Operations on (03) 9797 7341. Naturally, telephoning is the quickest and the best way to contact. However, if you prefer to write the address is:

The Manager
Holden and Isuzu Customer Assistance Services
GPO Box 343C
Melbourne, 3001.

Your letter should clearly outline your concern or query, and include the following:

- Your name and address
- Telephone numbers, both private & business
- Servicing Dealership's name and address
- Vehicle model
- Vehicle identification number (I.S.O.V.I.N.), refer to the inside front cover of this Handbook.
- Date of purchase
- Current odometer reading

Most of this information will be found on the Vehicle Identification Certificate, located inside the front cover of this handbook.

Before you write however, remember that the telephone is the quicker and more efficient means of communication.

CHAPTER 10

Towing

Page

10-2 Loading the vehicle
10-2 Towing weights
10-3 Tow bar ball loads
10-3 Running-in when towing
10-4 Towing precautions

LOADING AND TOWING

Overloading is a safety hazard and could also shorten the life of your vehicle or its parts.

Curb mass

The curb mass shown below is for the weight of a standard unloaded vehicle with a full tank of fuel. The weights shown below are for a vehicle fitted with a manual transmission. If your vehicle is fitted with an automatic transmission add 20 kg.

Petrol, long wheel base = 1,865 kg
Petrol, short wheel base = 1,790 kg
Diesel = 1,955 kg

G.V.M.

Gross Vehicle Mass (G.V.M.) is the total weight that a vehicle is allowed to weigh when fully loaded. This must include luggage, passengers, a full tank of fuel and tow bar ball load. The maximum, allowable G.V.M. for short wheel base models is 2,500 kg, or 2,600 kg for long wheel base models.

Towing capacity (State regulations permitting)

You may tow up to 750 kg without trailer braking.
When towing from 750 kg to 2,000 kg the trailer must have, at least, over run trailer brakes.
If towing over 2,000 kg up to the maximum allowable mass of 2,500 kg the trailer must be fitted with driver actuated brakes operating on all wheels which includes 'break away' operation in an emergency.
Note: The maximum rated towing capacity for your vehicle is 2,500 kg. Isuzu-General Motors offer a genuine tow bar package of 2,250 kg. If you wish to use the additional towing capacity from 2,250 kg up to 2,500 kg consult a tow bar specialist for a tailored Heavy Duty tow bar.
In all cases, the tow bar and brakes must be correctly rated to tow the mass required.
Note: If you tow a trailer at an altitude of more than 1,000 m above sea-level, reduce the maximum trailer weight by 10% of the G.V.M. for every increase of 1,000 m above sea-level. This is the result of a decrease in engine performance owing to decrease in the atmospheric pressure.

G.C.M. (Gross Combined Mass)

G.C.M. is the maximum, allowable combined weight of a vehicle (with passengers, luggage and a full tank of fuel) plus the weight of a packed trailer.
The maximum, allowable G.C.M. for short wheel base models is 5,000 kg, or 5,100 kg for long wheel base models.

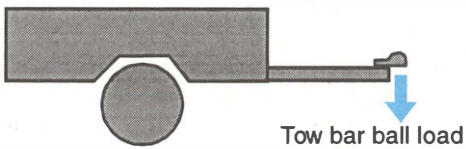
Front and rear axle loads

The maximum allowable front axle load is 1,250 kg. The maximum allowable rear axle load is 1,400 kg. However, the combination of the front and rear axle load should never exceed the maximum G.V.M.
Remember to take the tow bar ball load into account when determining the rear axle load.

LOADING AND TOWING

Tow bar ball load

The ball load must not exceed 100 kg. Ideally, the ball load should be 10% of the packed trailer weight. This can be adjusted by correctly packing the contents of the trailer.



If the ball load is too light or too heavy, the steering and handling of the vehicle will be affected.

The vehicle and trailer should remain horizontal and if this can not be achieved through better load distribution then a load equalizer hitch should be used.

Fitting bull bars, driving lights, insect screens

When fitting these accessories be careful not to restrict air flow through the condenser and radiator, otherwise engine overheating and/or poor air conditioning performance may result.

Roof racks

It must be understood that roof rack loads alter the handling characteristics of a vehicle due to a change in the centre of gravity. When carrying loads on the roof rack avoid abrupt swerving or sharp steering manoeuvres. Remember to take the roof rack load into account when determining G.V.M. and G.C.M. as your vehicle cannot carry more, just because it is stowed on the roof.

Running-in when towing

It is best to drive your new vehicle for 1,500 km before towing a load. If you must tow before this do not exceed 80 km/h on good roads. No heavy, off road towing should be attempted before 1,500 km.

Towing equipment

Isuzu-General Motors (I-GM) towing equipment is recommended where it is available. Where it is not available, no recommendation is made as to the make of equipment which should be used. I-GM will not accept liability for defects occurring in towing equipment not marketed by Holden or for defects in the car arising from the use of such equipment.

TOWING PRECAUTIONS

- Your vehicle will handle differently when towing. It's a good idea to make a couple of short distance trips with the caravan or trailer before you set off on the big one.
- Have your vehicle correctly maintained and serviced.
- Have your caravan or trailer maintained and serviced, with particular attention given to condition of brakes, tyres, suspension, wheel bearings, towing coupling and lighting.
- Driving speed should be reduced when towing.
- Ensure that the loads in the trailer/caravan are secured so that they cannot slip.
- You should have an extended-arm mirror on both sides of your vehicle.
- Headlights may need re-aiming after the loaded caravan has been hitched.
- Use a lower gear, rather than your brakes when descending steep hills.
- If your caravan or trailer moves off the road behind you, allow the left wheels of your vehicle to move off as well. When it is safe to do so, carefully steer back on to the road. A sudden attempt to steer back could make you swerve dangerously.
- Avoid sudden steering manoeuvres at high speed to minimize trailer weight affecting vehicle and trailer control.
- Trailer brakes are required on trailers weighing over 500 kg when loaded. Some States require trailer brakes on loads less than 500 kg.
- The brakes on the trailer or caravan must be designed to cope with the braking requirements of that trailer or caravan under all towing conditions, without adversely affecting the brakes on the vehicle.
- Correctly rated towbar and tongue package must be used.
- Ensure that the tow bar does not obscure the rear licence plate. If necessary, remove the towbar tongue when it is not required for towing.
- More frequent vehicle maintenance is required when using your vehicle to pull a trailer or caravan, refer Chapter 12.
- It is permissible to tap into the brake system with a unit not more than 0.21cc of fluid displacement during the operation of the brakes.

Notes

CHAPTER 11

Cleaning

Page

11-2 Exterior cleaning

11-4 Interior cleaning

EXTERIOR CLEANING

Washing

The best way to preserve your vehicle's finish is to keep it clean by frequent washing. Wash the vehicle in lukewarm or cold water.

Do not use hot water or wash in the direct rays of the sun. Do not use strong soap or chemical detergents. All cleaning agents should be promptly flushed from the surface and not allowed to dry on the finish.

Polishing and waxing

Polishing is recommended to remove accumulated residue and eliminate any `weathered' appearance.

Your Holden Dealer offers several polishes and cleaners which have proven value in maintaining original finish appearance and durability.

Bright metal parts

Bright metal parts should be cleaned regularly to keep their lustre. Washing with water is all that is usually needed. However, chrome polish may be used on CHROME or STAINLESS STEEL trim, if necessary. A coating of wax, rubbed to a high polish, is recommended for all bright metal parts.

Aluminium wheels

Aluminium wheels have a clear finish similar to paint. Use a chamois, sponge or other soft material when washing the wheels.

Foreign material deposits

Road oil, tar, sap, salt, bird droppings, chemicals from industrial chimneys and other foreign matter may damage vehicle finishes if allowed to remain on painted surfaces.

Prompt washing may not completely remove all of these deposits. When using chemical cleaners developed for this purpose be certain they are safe for use on painted surfaces.

Finish damage

Any stone chips, fractures or deep scratches in the finish should be repaired promptly. Exposed metal will corrode quickly and may develop into a major repair expense. Minor chips and scratches can be repaired using touch-up materials available from your Holden Dealer.

EXTERIOR CLEANING

Corrosion protection

Generally, your vehicle has been designed and built to resist corrosion. Special materials and protective finishes were applied to most parts of your vehicle when it was built to help maintain good looks, strength and reliable operation. However, some parts which are normally not visible (such as certain parts under the vehicle and under the hood) are strong enough so that surface rust will not affect their reliability. So corrosion protection is not needed or used on these parts. By omitting unneeded rust protection on such parts and applying extra protection where it is needed most, the best value is assured for the buyer.

Sheet metal damage

If your vehicle is damaged and required sheet metal repair or replacement, make sure the body repair shop applies anti-corrosion material to the parts repaired or replaced so that corrosion protection is restored.

Underbody maintenance

It is recommended to flush the underbody with plain water at least once a year. Take care to clean any areas well where mud and other debris can collect. Sediment packed in closed areas of the frame should be loosened before being flushed.

Wiper blade cleaning

Much of the road scum thrown up onto the windscreen glass (causes smearing when the wipers are switched on) transfers onto the wiper blades. Many owners, whilst they methodically clean the windscreen glass, omit to clean the wiper blades and consequently smearing of the glass reappears immediately the wiper blades are set in motion. The blades can be cleaned by simply lifting them off the windscreen glass and then using warm water and a recognised washing fluid.

IMPORTANT: Do not operate the wipers blades by hand as this may damage the wiper drive mechanism.

Should the wiper blades be frozen to the windscreen, it is imperative that they be lifted off and freed by hand before switching on the wipers.

INTERIOR CLEANING

Some cleaners may be poisonous or flammable and their improper use may cause personal injury or damage the inside of the vehicle. Therefore, when cleaning the inside of the vehicle, DO NOT USE volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents except as noted in the fabric cleaning advice on stain removal that follows. NEVER use carbon tetrachloride, gasoline, benzene or naphtha for any cleaning purpose.

Overexposure to these vapours may result in a health problem. This is even more likely to occur in small, un-ventilated spaces. It is recommended that all vehicle doors be opened for ventilation when any cleaning agents or other chemicals are used in the interior. Approved respiratory protection equipment may be needed. Follow the manufacturer's advice whenever cleaning agents or other chemicals are used, inside or outside the vehicle.

To avoid possible permanent discoloration of white or light coloured seats, DO NOT let materials with unstable dyes come in contact with seat trim materials until the trim materials are completely dry (this would include certain types of casual clothing, such as coloured denims, corduroys, leathers and suedes, decorative paper, etc.).

With the use of modern trim materials it is VERY IMPORTANT that proper cleaning techniques and cleaners be used. Failure to do this on the first cleaning may result in water spots, spot rings or setting of stains, all of which make it more difficult to remove on a second cleaning.

The portions of the following cleaning instructions that re in bold face are especially important and MUST be followed. Dust and loose dirt that accumulate on interior fabrics should be removed often with a vacuum cleaner or soft brush. Vinyl or leather trim should be wiped regularly with a clean damp cloth. Normal trim soil, spots or stains can be cleaned with conventional cleaners:

Remember these three basic steps before cleaning:

1. Remove stains as quickly as possible before they become `set'.
2. Use a clean cloth or sponge and change to a clean area often. A soft brush may be used if stains persist.
3. Use solvent type cleaners only in a well ventilated area. Do not saturate the stained area.
4. If a ring forms after spot cleaning, clean the entire area IMMEDIATELY.
5. Follow specific instruction on cleaner labels.

INTERIOR CLEANING cont.

Spot cleaning with solvent cleaner

Before trying to remove a spot or stain from fabric, determine as accurately as you can when kind and how old the spot or stain is. Some spots or stains can be removed with water or mild soap solutions, refer `Removal of specific stains'. Spots or stains should always be removed as soon as possible.

Some types of marks, such as lipstick, inks and grease, are very difficult (sometimes impossible) to completely remove. When cleaning this type of stain be sure not to enlarge the soiled area. Fabric cleaner (solvent type) is excellent for spot cleaning grease, oil or fat.

- Gently scrape excess stain off trim material with a clean, DULL knife or scraper. USE VERY LITTLE CLEANER, light pressure and clean cloths (preferably cheesecloth). Cleaning should be from the outside of the stain "feathering" towards the centre. Keep changing to a clean section of cloth.
- When the stain is cleaned from the fabric, immediately dry the area with an air hose, hair dryer or heat lamp to help prevent a cleaning ring. Use caution with hair dryer or lamp to prevent damage to fabric.
- If a ring forms, immediately repeat the cleaning operation over a slightly larger area with emphasis on `feathering' towards its centre. If ring still remains, mask off surrounding trim sections and clean entire affected area with a multi-purpose powder cleaner (as described under `General soilage or water spots from fabric').

Cleaning Glass surfaces

Glass surfaces should be cleaned regularly. Use of glass cleaner will remove normal tobacco smoke and dust films sometimes caused by ingredients used in vinyls and interior plastics. Never use abrasive cleaners on any vehicles glass as they may cause scratches.

General soilage or water spots from fabric

Multipurpose powdered cleaner is excellent for this type of cleaning and for cleaning panel sections where small cleaning rings may be left from spot cleaning.

- Vacuum area thoroughly to remove loose dirt.
- ALWAYS clean a full trim assembly or complete trim section. Mask surrounding trim along stitch or welt lines.
- Mix multipurpose powdered cleaner in strict accordance with directions on the label of the container. Mix in proportion for smaller quantities.
- USE SUDS ONLY ON A CLEAN SPONGE OR SOFT BRISTLE BRUSH. DO NOT SATURATE FABRIC OR RUB HARSHLY WITH BRUSH.
- IMMEDIATELY AFTER CLEANING WIPE OFF EXCESS CLEANER WITH SLIGHTLY DAMP ABSORBENT TOWEL OR CLOTH.
- IMMEDIATELY AFTER WIPING, FORCE-DRY WITH AIR HOSE, HAIR DRYER OR HEAT LAMP. Use caution with hair dryer or lamp to prevent damage to fabric.
- When trim materials with a sheen or lustre finish are dry, wipe fabric lightly with a soft, dry, clean cloth to restore the sheen or lustre.

INTERIOR CLEANING cont.

Specific stains

Grease or oil

These include butter, margarine, shoe polish, coffee with cream, chewing gum, cosmetic creams, vegetable oils, wax, crayon, tar and asphalt.

- Carefully scrape off excess stain, then use fabric cleaner (solvent type) as previously described.
- Shoe polish, wax crayons, tar and asphalt will stain if allowed to remain on trim. They should be removed as soon as possible. Use caution as cleaner will dissolve them and may cause them to bleed.

Non-greasy stains

These include black coffee, egg, fruit, fruit juice, milk, soft drinks, wine, vomit and blood.

- Carefully scrape off excess stain, then sponge stain with cool water.
- If stain remains, use a multipurpose powdered cleaner (foam type) as previously described.
- If odour persists after cleaning vomit or urine, treat area with a water-waking soda solutions: 5 ml (1 teaspoon) baking soda to 250 ml (1 cup) warm water.
- Finally, if needed, clean lightly with fabric cleaner (solvent type).

Combination stains

These include ice cream, mayonnaise, chilli sauce and unknown stains.

- Carefully scrape off excess stain, then clean with cool water and allow to dry.
- If stain remains, clean with fabric cleaner (solvent type).

Cleaning vinyl or leather

Ordinary soilage can be removed with warm water and a mild soap such as saddle soap or oil soap.

- Apply a small amount of soap solution and allow to soak for a few minutes to loosen dirt, then rub briskly with a clean damp cloth to remove dirt and traces of soap. This may be repeated several times, if necessary.
- Some compounds such as tar, asphalt, shoe polish etc. will stain if allowed to remain to trim. They should be wiped off as quickly as possible and the area cleaned with a clean cloth dampened with vinyl cleaner (solvent type).

Seat belts

- Clean seat belts only with mild soap and lukewarm water.
- DO NOT BLEACH OR DYE BELTS AS THIS MAY SEVERELY WEAKEN THEM.

CHAPTER 12

Servicing

Page

12-2 Service intervals
12-3 Extreme operating conditions
12-4 Maintenance schedule
12-6 Service costs
12-7 Maintenance coupons

SERVICE INTERVALS

When it comes to service, remember that your Holden Dealer has the trained personnel and specialised equipment to correctly service your vehicle. Your Dealer invites you to return for all your service needs both during and after the warranty period.

The safety, economy, emission control, performance and reliability of your vehicle cannot be assured unless regular maintenance is performed, preferably by factory-trained technicians at your Holden Dealer.

Therefore, it is in the owner's interest that the following services are performed at the specified Distance or Months (whichever occurs first).

5,000 km	- 3 months
10,000 km	- 6 months
20,000 km	- 1 year
30,000 km	- 1.5 years
40,000 km	- 2 years
50,000 km	- 2.5 years
60,000 km	- 3 years
70,000 km	- 3.5 years
80,000 km	- 4 years
90,000 km	- 4.5 years
100,000 km	- 5 years
110,000 km	- 5.5 years
120,000 km	- 6 years

The three month (5,000 kilometres) service will be performed "labour free" by the Selling Dealer.

This service may be carried out by another Holden Dealer provided you have a letter of Introduction from the Selling Dealer.

Your Dealer will supply the necessary Letter of Introduction on request.

It is the owner's responsibility to have the diesel engine oil changed between the regular service interval of 10,000 km or 6 months.

The services shown in this schedule between 10,000 and 120,000 are to be performed again after 120,000 km at the same intervals.

NOTE: All maintenance services as listed in this handbook and replacement of service items are the responsibility of the owner and as such are NOT considered, under the provisions of the new vehicle warranty to be rectification of defective material and workmanship. Items such as wheel alignment, necessary adjustments to drive belts, transmission, clutch, parking brake, etc. or any other items which may require servicing due to fair wear and tear will be carried out at the owner's cost.

Failure to have proper maintenance services carried out by an Authorised Holden Dealer or service Dealer may void your new Vehicle Warranty if the work is not carried out in accordance with Holden's specifications. It is strongly recommended that you read the "New Vehicle Warranty" in Chapter 9 so that you are aware of your entitlements.

Service coupons are provided further on in this chapter. When each service is performed the coupon is removed so that the following service coupon is readily visible to remind you when the next service is due.

After the service is completed, the owner should check that the service has been validated, by the Dealer stamping and signing the coupon stub. This is important as it will not only assist in the determination of Warranty Claims, but will enhance the value of the vehicle when selling.

EXTREME OPERATING CONDITIONS

If your vehicle operates under any of the extreme conditions listed in the following table it is recommended that some items be serviced more frequently than the intervals specified in the Maintenance Plan.

NOTE: The extra services listed below need only be used continuously if your vehicle operates continuously under the conditions specified.

If you operate under any of these conditions on a one off basis e.g. holiday trip, then an extra service should be for that period only.

As a guide, if you operate continually for a period of one month or 1,000 kilometres under any of the extreme conditions, then this could qualify for additional services.

If at any time it is considered that the above items or other items should be more frequently serviced due to the type of operation or before a long trip, discuss the situation with the service manager of your Holden Dealer.

Change petrol engine oil every 5,000 km			C	D
Change diesel engine oil every 2,500 km			C	D
Replace petrol engine oil filter every 10,000 km			C	D
Replace diesel engine oil filter every 5,000 km			C	D
Change air cleaner element every 10,000 km			C	
Inspect steering system for looseness or damage every every 5,000 km		B		
Inspect universal joints and sleeve for wear every 5,000 km		B	C	
Change manual transmission and transfer case oil every 20,000 km (after initial change at 10,000 km)		B		
Change auto trans fluid and strainer every 40,000 km	A	B	C	D
Change auto transmission transfer case oil every 20,000 km (after initial change at 5,000km)		B		
Change differential oil every 20,000 km (after initial change at 10,000 km)		B		
Inspect disc brake pads and discs every 5,000 km	A	B	C	

A = Repeated short trips

B = Driving on rough roads

C= Driving on dusty roads

D = Repeated short trips in extremely cold weather

MAINTENANCE SCHEDULE

	Use odometer reading or months, whichever occurs first	x1,000 km	5	10	20	30	40	50	60	70	80	90	100	110	120
		or years	.25	.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
	UNDER BONNET														
P	Engine oil	*		R	R	R	R	R	R	R	R	R	R	R	R
P	Engine oil filter	*		R		R		R		R		R		R	
D	Engine oil	*		R	change every 5000 km or 3 months										
D	Engine oil filter	*		R	R	R	R	R	R	R	R	R	R	R	R
	Oil contamination		I	I	I	I	I	I	I	I	I	I	I	I	I
	Fluid levels: power steering, brake, washer, auto trans, clutch, battery		I	I	I	I	I	I	I	I	I	I	I	I	I
	Coolant level 50% concentration		I	I	I	I	R	I	I	I	R	I	I	I	R
	Radiator cap and cooling system pressure test				I		I		I		I		I		I
	Idling speed and acceleration		I	I	I	I	I	I	I	I	I	I	I	I	I
P	Timing belt												R		
	All hoses and pipes in engine compartment for deterioration or leaks			I	I	I	I	I	I	I	I	I	I	I	I
	Clean front of radiator core and A/C condensor				I		I		I		I		I		I
	Fuel filter				R		R		R		R		R		R
	Air cleaner element	*	I		I		I		I		R		I		I
	All V-drive belts for tension and damage		I	I	I	I	I	I	I	I	I	I	I	I	I
D	Valve clearance		A		A		A		A		A		A		A
P	Spark plugs						R				R				R
P	Spark plug leads												I		
P	Oxygen sensor					replace every 150,000 km or 7.5 years									
	Power steering fluid						R				R				R
	UNDER VEHICLE														
	Clutch fluid						R				R				R
	Brake fluid						R				R				R
	Manual trans and transfer case oil	*	I	I	I	I	R	I	I	I	R	I	I	I	R
	Automatic trans transfer case oil	*	I	I	I	I	R	I	I	I	R	I	I	I	R
	Universal joints and splines for wear	*		I	I	I	I	I	I	I	I	I	I	I	I
	Universal joints and sliding sleeve	*	L	L	L	L	L	L	L	L	L	L	L	L	L
	Differential gear oil (front and rear)	*	I	I	I	I	R	I	I	I	R	I	I	I	R
	Disc brake pads and disc wear	*		I	I	I	I	I	I	I	I	I	I	I	I
	Wheel nuts		T	T	T	T	T	T	T	T	T	T	T	T	T
	Front wheel bearing & locking hubs grease					R			R			R			R
	Front and rear hub bearings for looseness				I		I		I		I		I		I
	Vehicle ride height		I	I	I	I	I	I	I	I	I	I	I	I	I

MAINTENANCE SCHEDULE

Use odometer reading or months, whichever occurs first	x1,000 km	5	10	20	30	40	50	60	70	80	90	100	110	120
	or years	.25	.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
UNDER VEHICLE cont.														
Tyre pressure and wheels and tyres for damage		I	I	I	I	I	I	I	I	I	I	I	I	I
Tyre rotation						Rotate as necessary								
General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, buts, hoses, pipes and for leaks.	*	I	I	I	I	I	I	I	I	I	I	I	I	I
INSIDE VEHICLE														
Clutch pedal travel and free play		I	I	I	I	I	I	I	I	I	I	I	I	I
Steering wheel play		I	I	I	I	I	I	I	I	I	I	I	I	I
Brake pedal travel and free play		I	I	I	I	I	I	I	I	I	I	I	I	I
Park brake lever travel		I		I		I		I		I		I		I
Park brake ratchet for wear or damage				I		I		I		I		I		I
ROAD TEST														
Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch		I	I	I	I	I	I	I	I	I	I	I	I	I
SERVICE TIMES														
Petrol engine		-	1.2	1.4	1.9	2.0	1.2	2.2	1.2	2.0	1.9	2.9	1.2	2.7
Diesel engine		-	1.2	2.2	1.9	2.5	1.2	3	1.2	2.5	1.9	2.2	1.2	3.2
add for automatic transmission		-	-	-	-	0.2	-	-	-	0.2	-	-	-	0.2
add for manual transmission		-	-	-	-	0.4	-	-	-	0.4	-	-	-	0.4

I: Inspect and correct or replace as necessary **R**: Replace or change
T: Tighten to specified torque **L**: Lubricate **A**: Adjust **P**: Petrol **D**: Diesel

*: under extreme operating conditions more frequent maintenance is required, refer page 12-3

MAINTENANCE SCHEDULE

- The owner will be charged for all lubricants and materials used plus labour at the times recommended on the previous page.
- The repair or replacement of any part found faulty during a service check and not covered by Holden Warranty will be added to the charges.
- Where any deficiencies are noted, such items should be reported to the owner/ operator so that the extra work required can be authorised.
- The use of break-in oil, tune up compounds, friction reducing compounds and other supplemental additives are not recommended; their use will not only increase operating costs, but may indeed be harmful to your vehicle.

5,000 km or 3 months

SERVICE COUPON

This coupon should not be removed until the vehicle is presented for service.

Owner's Name Mr. / Mrs. ..... / Miss. / Other.....

Address .....

Town & State ..... Postcode .....

Reg. no. ..... Engine no .....

I.S.O.V.I.N. ..... Model .....

Selling Dealer's Stamp & Signature .....

Date of Acquisition .....

This vehicle has been thoroughly checked in accordance with the schedule on the reverse side of this coupon.

Servicing Dealer's Stamp & Signature .....

Servicing Dealer .....

Town ..... State .....

Owner's signature .....

This service will be carried out without charge to the owner. The owner will, however, be charged for any lubricants or parts used.

P.T.O.

5,000 km or 3 months Service Validation

This vehicle has been thoroughly checked in accordance with the 5,000 km service.

Dealer .....

Service Manager's signature .....

Date ..... Odometer reading .....

Under hood - petrol only

- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check all V-drive belts for tension and damage
- ❒ Check idling speed and acceleration
- ❒ Check air cleaner element

Under hood - diesel only

- ❒ Change engine oil
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, ciutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check idling speed and acceleration
- ❒ Check all V-drive belts for tension and damage
- ❒ Adjust valve clearance
- ❒ Check air cleaner element

Under vehicle - petrol and diesel

- ❒ Check/correct oil level: manual trans and transfer case
- ❒ Check/correct oil level: automatic transmission transfer case
- ❒ Check/correct gear oil level: differential (front and rear)
- ❒ Tighten wheel nuts
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play
- ❒ Check park brake lever travel

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

INTERMEDIATE OIL CHANGES

15,000 km or 9 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
25,000 km or 15 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
35,000 km or 21 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
45,000 km or 27 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
55,000 km or 33 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
65,000 km or 39 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....

INTERMEDIATE OIL CHANGES

75,000 km or 45 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
85,000 km or 51 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
95,000 km or 57 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
105,000 km or 63 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
125,000 km or 69 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....
135,000 km or 71 Months oil change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.....

10,000 km or 6 months

SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 1.2 hours

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature ..... Date .....

Under hood - petrol only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage
- ❒ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage

P.T.O.

10,000 km or 6 months Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Additional services performed: .....
.....
.....
.....
.....
.....

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

20,000 km or 1 year SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 1.4 hours for petrol engine
- 2.2 hours for diesel engine

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature ..... Date .....

Additional services performed: .....

.....

.....

.....

.....

.....

20,000 km or 1 year Service Validation

Servicing Dealer .....

Brake fluid changed: YES/NO

Date of Service .....

Odometer .....

Signed .....

Under hood - petrol only

- ☐ Change engine oil
- ☐ Check for oil contamination
- ☐ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ☐ Check/correct coolant level and % concentration
- ☐ Check radiator cap and cooling system pressure
- ☐ Check all hoses and pipes in engine compartment for deterioration or leaks
- ☐ Clean front of radiator core and A/C condenser
- ☐ Replace fuel filter
- ☐ Check air cleaner element
- ☐ Check all V-drive belts for tension and damage
- ☐ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil (every 5,000 km) and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check radiator cap and cooling system pressure
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Check air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Adjust valve clearance

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Inspect front and rear hub bearings for looseness
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play
- ❒ Check park brake lever travel
- ❒ Check park brake ratchet for wear or damage

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

30,000 km or 1½ years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 1.9 hours

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature ..... Date .....

Under hood - petrol only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage
- ❒ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage

P.T.O.

30,000 km or 1½ years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Additional services performed: .....
.....
.....
.....
.....

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Repack front wheel bearings and locking hubs
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

40,000 km or 2 years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 2.0 hours for petrol engine
- 2.5 hours for diesel engine
- add 0.2 hours for auto trans
- add 0.4 hours for manual trans

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature.....Date .....

40,000 km or 2 years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Additional services performed: .....
.....
.....
.....
.....

Under hood - petrol only

- ❒ Change engine oil
- ❒ Check for oil contamination
- ❒ Check fluid levels: washer, auto trans.
- ❒ Replace coolant.
- ❒ Check radiator cap and cooling system pressure
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Check air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Replace spark plugs
- ❒ Check idling speed and acceleration
- ❒ Replace power steering fluid

Under hood - diesel only

- ❒ Change engine oil (every 5,000 km) and filter
- ❒ Check for oil contamination
- ❒ Check fluid levels: washer, auto trans.
- ❒ Replace coolant
- ❒ Check radiator cap and cooling system pressure
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Check air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Adjust valve clearance
- ❒ Replace power steering fluid

Under vehicle - petrol and diesel

- ❒ Change clutch fluid
- ❒ Change brake fluid
- ❒ Change manual transmission and transfer case oil
- ❒ Change automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Change differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Inspect front and rear hub bearings for looseness
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play
- ❒ Check park brake lever travel
- ❒ Check park brake ratchet for wear or damage

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

50,000 km or 2½ years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 1.2 hours

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature.....Date .....

50,000 km or 2½ years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer.....
Signed.....

Additional services performed:.....
.....
.....
.....
.....

Under hood - petrol only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage
- ❒ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage

P.T.O.

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

60,000 km or 3 years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 2.2 hours for petrol engine
- 3.0 hours for diesel engine

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature ..... Date .....

Additional services performed: .....

.....

.....

.....

.....

.....

60,000 km or 3 years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Under hood - petrol only

- ☐ Change engine oil
- ☐ Check for oil contamination
- ☐ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ☐ Check/correct coolant level and % concentration
- ☐ Check radiator cap and cooling system pressure
- ☐ Check all hoses and pipes in engine compartment for deterioration or leaks
- ☐ Clean front of radiator core and A/C condenser
- ☐ Replace fuel filter
- ☐ Check air cleaner element
- ☐ Check all V-drive belts for tension and damage
- ☐ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil (every 5,000 km) and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check radiator cap and cooling system pressure
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Check air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Adjust valve clearance

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Repack front wheel bearings and locking hubs
- ❒ Inspect front and rear hub bearings for looseness
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play
- ❒ Check park brake lever travel
- ❒ Check park brake ratchet for wear or damage

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

70,000 km or 3½ years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 1.2 hours

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature.....Date .....

70,000 km or 3½ years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Additional services performed: .....
.....
.....
.....
.....

Under hood - petrol only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage
- ❒ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage

P.T.O.

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

80,000 km or 4 years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 2.0 hours for petrol engine
- 2.5 hours for diesel engine
- add 0.2 hours for auto trans
- add 0.4 hours for manual trans

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature ..... Date .....

Additional services performed: .....

.....

.....

.....

.....

.....

80,000 km or 4 years Service Validation

Servicing Dealer .....

Brake fluid changed: YES/NO

Date of Service .....

Odometer .....

Signed .....

Under hood - petrol only

- ☐ Change engine oil
- ☐ Check for oil contamination
- ☐ Check fluid levels: washer, auto trans
- ☐ Replace coolant
- ☐ Check radiator cap and cooling system pressure
- ☐ Check all hoses and pipes in engine compartment for deterioration or leaks
- ☐ Clean front of radiator core and A/C condenser
- ☐ Replace fuel filter
- ☐ Replace air cleaner element
- ☐ Check all V-drive belts for tension and damage
- ☐ Replace spark plugs
- ☐ Check idling speed and acceleration
- ☐ Replace power steering fluid

Under hood - diesel only

- ❒ Change engine oil (every 5,000 km) and filter
- ❒ Check for oil contamination
- ❒ Check fluid levels: washer, auto trans
- ❒ Replace coolant
- ❒ Check radiator cap and cooling system pressure
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Replace air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Adjust valve clearance
- ❒ Replace power steering fluid

Under vehicle - petrol and diesel

- ❒ Change clutch fluid
- ❒ Change brake fluid
- ❒ Change manual transmission and transfer case oil
- ❒ Change automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Change differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Inspect front and rear hub bearings for looseness
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play
- ❒ Check park brake lever travel
- ❒ Check park brake ratchet for wear or damage

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

90,000 km or 4½ years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 1.9 hours

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature.....Date .....

Under hood - petrol only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage
- ❒ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage

P.T.O.

90,000 km or 4½ years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Additional services performed: .....
.....
.....
.....
.....

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Repack front wheel bearings and locking hubs
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

100,000 km or 5 years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 2.9 hours for petrol engine
- 2.2 hours for diesel engine

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature..... Date .....

100,000 km or 5 years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Additional services performed: .....
.....
.....
.....
.....

Under hood - petrol only

- ☐ Change engine oil
- ☐ Check for oil contamination
- ☐ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ☐ Check/correct coolant level and % concentration
- ☐ Check radiator cap and cooling system pressure
- ☐ Replace timing belt
- ☐ Check all hoses and pipes in engine compartment for deterioration or leaks
- ☐ Clean front of radiator core and A/C condenser
- ☐ Replace fuel filter
- ☐ Check air cleaner element
- ☐ Check all V-drive belts for tension and damage
- ☐ Inspect spark plug leads
- ☐ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil (every 5,000 km) and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check radiator cap and cooling system pressure
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Check air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Adjust valve clearance

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Inspect front and rear hub bearings for looseness
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play
- ❒ Check park brake lever travel
- ❒ Check park brake ratchet for wear or damage

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

110,000 km or 5½ years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 1.2 hours

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature ..... Date .....

110,000 km or 5½ years Service Validation

Servicing Dealer .....
Brake fluid changed: YES/NO
Date of Service .....
Odometer .....
Signed .....

Additional services performed: .....
.....
.....
.....
.....

Under hood - petrol only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage
- ❒ Check idling speed and acceleration

Under hood - diesel only

- ❒ Change engine oil and filter
- ❒ Check for oil contamination
- ❒ Check all fluid levels: power steering, brake, washer, auto trans, clutch.
- ❒ Check/correct coolant level and % concentration
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Check all V-drive belts for tension and damage

P.T.O.

Under vehicle - petrol and diesel

- ❒ Check level of manual transmission and transfer case oil
- ❒ Check level of automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Check level of differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

120,000 km or 6 years SERVICE COUPON

I authorise performance of the services specified on the rear of this coupon.
I understand I will be charged for the following hours of labour:

- 2.7 hours for petrol engine
- 3.2 hours for diesel engine
- add 0.2 hours for auto trans
- add 0.4 hours for manual trans

Also, that there will be a charge for all lubricants, filters and parts used as a result of checks and additional services performed as requested.

There will also be a charge for additional services as requested:

.....

.....

Signature ..... Date .....

Additional services performed: .....

.....

.....

.....

.....

.....

Under hood - petrol only

- ❒ Change engine oil
- ❒ Check for oil contamination
- ❒ Check fluid levels: washer, auto trans
- ❒ Replace coolant
- ❒ Check radiator cap and cooling system pressure
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Check air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Replace spark plugs
- ❒ Check idling speed and acceleration
- ❒ Replace power steering fluid

120,000 km or 6 years Service Validation

Servicing Dealer .....

Brake fluid changed: YES/NO

Date of Service .....

Odometer .....

Signed .....

Under hood - diesel only

- ❒ Change engine oil (every 5,000 km) and filter
- ❒ Check for oil contamination
- ❒ Check fluid levels: washer, auto trans
- ❒ Replace coolant
- ❒ Check radiator cap and cooling system pressure
- ❒ Check idling speed and acceleration
- ❒ Check all hoses and pipes in engine compartment for deterioration or leaks
- ❒ Clean front of radiator core and A/C condenser
- ❒ Replace fuel filter
- ❒ Check air cleaner element
- ❒ Check all V-drive belts for tension and damage
- ❒ Adjust valve clearance
- ❒ Replace power steering fluid

Under vehicle - petrol and diesel

- ❒ Change clutch fluid
- ❒ Change brake fluid
- ❒ Change manual transmission and transfer case oil
- ❒ Change automatic transmission transfer case oil
- ❒ Inspect universal joints and splines for wear
- ❒ Lubricate universal joints and sliding sleeve
- ❒ Change differential gear oil (front and rear)
- ❒ Inspect disc brake pads and disc wear
- ❒ Tighten wheel nuts
- ❒ Repack front wheel bearings and locking hubs
- ❒ Inspect front and rear hub bearings for looseness
- ❒ Check tyre pressure and wheels and tyres for damage
- ❒ General under body check: steering and suspension components, (inc. shock absorbers, all rubber bushes and boots, ball joints and connections) park brake cables, fuel system, exhaust system, brake system, bolts, nuts, hoses, pipes and for leaks
- ❒ Check vehicle ride height

Interior - petrol and diesel

- ❒ Check clutch pedal travel and free play
- ❒ Check steering wheel play
- ❒ Check brake pedal travel and free play
- ❒ Check park brake lever travel
- ❒ Check park brake ratchet for wear or damage

Road test - petrol and diesel

- ❒ Check vehicle on the road for braking, steering, engine response and trans operation. Check cruise control, park pawl operation, A/C performance and neutral start switch.

INDEX

Accidents 6-2
Air bags 6-4
Air conditioning 1-17
Air pressures (tyres) 7-13
Antenna 3-17
Anti-freeze fluid 7-6
Ash tray
  Front 1-21
  Rear 3-17
Automatic transmission
  Operation 4-6
  Fluid level 7-7

Battery (when flat) 6-10
Bonnet release 1-23
Brakes
  Precautions 4-12
  Fluid level 7-8
  Specifications 8-4
  Warning light 1-7
  Park brake 3-20
Bulbs (replacement) 8-7

Capacities (fluid) 8-2
Caravan & trailer towing 10-2
Carbon monoxide warning 5-2
Cassette 1-21
Check engine light 1-7
Child restraints 3-11
Cigarette lighter 1-21
Cleaning of vehicle 11-1
Clock 1-21
Cooling system
  Fluid level 7-6
  Overheating 6-8
  Temperature gauge 1-5
Customer assistance 9-21

Dealers (Authorised Holden) 9-12
Diesel
  Bleeding fuel system 6-16
  Draining water separator 6-15
  Glow plug 1-8
  Engine starting 4-4
  Idle control knob 4-4
  Warning lights 1-8
  Engine data 8-2
Dimensions 8-6
Dipping (headlights) 1-11
Dipstick 7-4
Dome light
  Bulb replacement 8-6
  Operation 3-16
Door locks 2-3

Emission control system 5-4
Engine
  Cooling system 7-6
  Identification number 8-8
  Overheating 6-8
  Specifications 8-2
  Starting petrol 4-3
  Starting diesel 4-4
  Warning light 1-7
Engine oil
  Capacity 8-2
  Checking levels 7-4
  Consumption notes 7-5
  Pressure light 1-6
  Pressure gauge 1-5
Exhaust gas warning 5-2

INDEX

Flashers
  Hazard warning 1-12
  Turn signal 1-11
Flat tyre 6-6
Flooded engine 4-3
Fluid capacities 8-2
Fluid levels
  Automatic transmission 7-7
  Brake 7-8
  Clutch 7-9
  Coolant 7-6
  Oil 7-4
  Power Steering 7-10
  Windscreen washer 7-11
Four wheel drive 4-9
Fuel
  Bleeding (diesel) 6-16
  Draining water from (diesel) 6-15
  Economy tips 5-5
  Gauge 1-5
  Refilling 5-3
  Warning light 1-6
Fumes (petrol) caution 5-2
Fuses 6-14

Gear ratios 8-3
Generator warning light 1-7
Glow plug (diesel) 1-8
Glovebox 1-21
G.V.M. 10-2

Hand brake 3-20
Hazard warning flashers 1-12
Heater controls 1-16
Headlamps
  Bulb replacement 8-7
  Switch 1-11
High beam indicator light 1-6
Holden Dealers 9-12
Hood 1-23
Horn 1-14
Hubs 4-10

Identification numbers 8-8
Idle control (diesel) 4-4
Ignition switch 1-14
Indicators (turn signals) 1-11
Indicator/warning lights 1-6
Infant & child restraints 3-12
Inflation (tyres) 7-13
Instrument panel 1-3
Interior (dome) light 3-16

Jack 6-6
Jump starting 6-10

Keys 2-1
Kerb weight 10-2

License plate light 8-7
Lights
  Bulb replacement 8-7
  Instrument panel 1-3
  Headlight switch 1-11
  Interior light 3-16
Loading information 10-2
Locks
  Bonnet 1-23
  Door 2-3
  Fuel filler 2-2
  Glovebox 1-21
  Ignition 1-14
Lubricants 8-2

INDEX

Maintenance schedule 12-4
Manuals (service) 7-2
Manual transmission
  Fluid capacity 8-3
  Operation 4-5
Mirrors 3-13
Model identifications 8-8

New vehicle running-in 4-12

Octane rating (fuel) 5-3
Oil
  Capacity 8-2
  Gauge 1-5
  Level 7-4
  Low pressure warning 1-6
Overheating 6-8
Owner responsibility
  Emission controls 5-2
  Weekly checks 7-0
  Maintenance service 12-1

Paintwork cleaning 11-2
Park brake
  Bulb replacement 8-7
  Lever 3-20
Parking 4-2
Petrol 5-1
Power steering
  Fluid level 7-10
  Precaution 4-13
Push starting 6-10

Radiator ..... - See "Cooling system"
Radio 1-21
Rear axle 8-3
Rear vision mirrors 3-13
Restraints 3-9
Running-in 4-12

Safer Driving precautions 4-12
Seat adjustment 3-5
Seat belts 3-9
Serial number 8-8
Service 12-1
Service manuals 7-2
Spare wheel 6-6
Specifications 8-2
Speedometer 1-4
SRS 6-4
Starting
  Flat Battery 6-10
  Normal engine 4-3
Steering (power) 7-10
Steering (tilt) 1-14
Stop/tail light replacement 8-7

Tachometer 1-4
Temperature gauge 1-5
Tilt steering 1-14
Towing
  Caravan/trailer 10-2
  Disabled vehicle 6-12
Transmission
  Automatic 4-6
  Gear ratios 8-3
  Manual 4-5
Turn signal
  Bulb replacement 8-7
  Operation 1-11

INDEX

Tyres
  General 7-14
  Inflation pressure 7-13

Vehicle Identification Number 8-8
Vehicle loading 10-2
Vehicle weights 10-2
Ventilation system 1-15
Voltmeter 1-4

Warning lights 1-6
Warranty 9-2
Washing 11-2
Water crossing 4-14
Water separator (diesel) 6-15
Wheel changing 6-6
Wheel hubs 4-10
Wheel replacement 7-14
Windows 3-13
Windscreen
  Wiper/washer control lever 1-10
  Fluid level 7-11
Wipers 1-10